Operation, Parts

Electric Airless Sprayers

334530A

EN

For professional use only.
Not approved for use in explosive atmospheres or hazardous locations.
For portable airless spraying of architectural paints and coatings.

395/490/495/595 Models:
3300 psi (228 bar, 22.8 MPa) Maximum Working Pressure
See page 3 for additional model information.

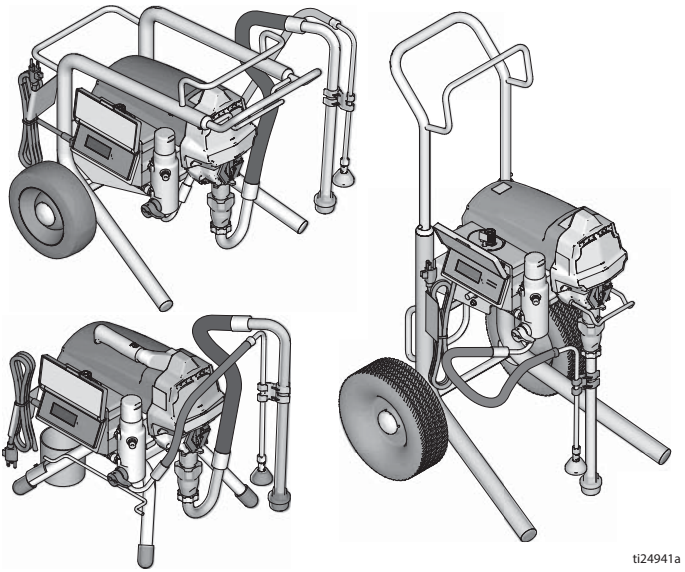
Important Safety Instructions

Read all warnings and instructions in this manual and related manuals.
Be familiar with the controls and the proper usage of the equipment.
Save these instructions.

Related Manuals

311861 (Contractor/FTx)
312830 (SG3)

334599



Use only genuine Graco replacement parts.
The use of non-Graco replacement parts may void warranty.

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Models

	VAC	Model	Stand	Lo-Boy	Hi-Boy
Intertek 110474 Certified to CAN/CSA C22.2 No. 68 Conforms to UL 1450	120 USA	Ultra MAX II 490 PC Pro	17C327	17C328	17C332
		Ultimate MX II 490 PC Pro	826199	826200	826201
		Ultra MAX II 495 PC Pro	17C333	17C334	17C335
		Ultimate MX II 495 PC Pro	826202	826203	826204
		Ultra MAX II 595 PC Pro		17C336	17C337
		Ultimate MX II 595 PC Pro		826205	826206
CE	120 Japan/Taiwan	Ultra MAX II 490 PC Pro	17C393		
		Ultra MAX II 495 PC Pro	17C399		
	230 CEE 7/7	ST MAX II 395 PC Pro	17C369		17C372
		ST MAX II 495 PC Pro	17C373		17C376
		ST MAX II 595 PC Pro			17C381
	230 Europe Multi	ST MAX II 495 PC Pro	17C374		17C377
		ST MAX II 595 PC Pro			17C382
	110 UK	ST MAX II 495 PC Pro	17C375		17C378
		ST MAX II 595 PC Pro			17C383
	230 Asia/ANZ	Ultra MAX II 490 PC Pro	17C395		
		Ultra MAX II 495 PC Pro	17C398	17C401	17C402
		Ultra MAX II 595 PC Pro		17C404	17C403
	230 China	Ultra MAX II 490 PC	17C394		

Warnings

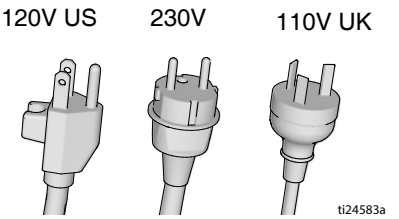
The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbols refer to procedure-specific risks. When these symbols appear in the body of this manual or on warning labels, refer back to these Warnings. Product-specific hazard symbols and warnings not covered in this section may appear throughout the body of this manual where applicable.

⚠WARNING

GROUNDING

This product must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This product is equipped with a cord having a grounding wire with an appropriate grounding plug. The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

- Improper installation of the grounding plug is able to result in a risk of electric shock.
- When repair or replacement of the cord or plug is required, do not connect the grounding wire to either flat blade terminal.
- The wire with insulation having an outer surface that is green with or without yellow stripes is the grounding wire.
- Check with a qualified electrician or serviceman when the grounding instructions are not completely understood, or when in doubt as to whether the product is properly grounded.
- Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.
- This product is for use on a nominal 120V or 230V circuit and has a grounding plug similar to the plugs illustrated below.



- Only connect the product to an outlet having the same configuration as the plug.
- Do not use an adapter with this product.

Extension Cords:

- Use only a 3-wire extension cord that has a grounding plug and a grounding receptacle that accepts the plug on the product.
- Make sure your extension cord is not damaged. If an extension cord is necessary use 12 AWG (2.5mm^2) minimum to carry the current that the product draws.
- An undersized cord results in a drop in line voltage and loss of power and overheating.

⚠WARNING

FIRE AND EXPLOSION HAZARD

Flammable fumes, such as solvent and paint fumes, in work area can ignite or explode. To help prevent fire and explosion:

- Do not spray flammable or combustible materials near an open flame or sources of ignition such as cigarettes, motors, and electrical equipment.
- Paint or solvent flowing through the equipment is able to result in static electricity. Static electricity creates a risk of fire or explosion in the presence of paint or solvent fumes. All parts of the spray system, including the pump, hose assembly, spray gun, and objects in and around the spray area shall be properly grounded to protect against static discharge and sparks. Use Graco conductive or grounded high-pressure airless paint sprayer hoses.
- Verify that all containers and collection systems are grounded to prevent static discharge. Do not use pail liners unless they are antistatic or conductive.
- Connect to a grounded outlet and use grounded extensions cords. Do not use a 3-to-2 adapter.
- Do not use a paint or a solvent containing halogenated hydrocarbons.
- Do not spray flammable or combustible liquids in a confined area.
- Keep spray area well-ventilated. Keep a good supply of fresh air moving through the area.
- Sprayer generates sparks. Keep pump assembly in a well ventilated area at least 20 feet (6.1 m) from the spray area when spraying, flushing, cleaning, or servicing. Do not spray pump assembly.
- Do not smoke in the spray area or spray where sparks or flame is present.
- Do not operate light switches, engines, or similar spark producing products in the spray area.
- Keep area clean and free of paint or solvent containers, rags, and other flammable materials.
- Know the contents of the paints and solvents being sprayed. Read all Material Safety Data Sheets (MSDS) and container labels provided with the paints and solvents. Follow the paint and solvents manufacturer's safety instructions.
- Fire extinguisher equipment shall be present and working.

SKIN INJECTION HAZARD

High-pressure spray is able to inject toxins into the body and cause serious bodily injury. In the event that injection occurs, **get immediate surgical treatment.**

- Do not aim the gun at, or spray any person or animal.
- Keep hands and other body parts away from the discharge. For example, do not try to stop leaks with any part of the body.
- Always use the nozzle tip guard. Do not spray without nozzle tip guard in place.
- Use Graco nozzle tips.
- Use caution when cleaning and changing nozzle tips. In the case where the nozzle tip clogs while spraying, follow the **Pressure Relief Procedure** for turning off the unit and relieving the pressure before removing the nozzle tip to clean.
- Equipment maintains pressure after power is shut off. Do not leave the equipment energized or under pressure while unattended. Follow the **Pressure Relief Procedure** when the equipment is unattended or not in use, and before servicing, cleaning, or removing parts.
- Check hoses and parts for signs of damage. Replace any damaged hoses or parts.
- This system is capable of producing 3300 psi. Use Graco replacement parts or accessories that are rated a minimum of 3300 psi.
- Always engage the trigger lock when not spraying. Verify the trigger lock is functioning properly.
- Verify that all connections are secure before operating the unit.
- Know how to stop the unit and bleed pressure quickly. Be thoroughly familiar with the controls.

Warnings

⚠WARNING

EQUIPMENT MISUSE HAZARD

Misuse can cause death or serious injury.

- Always wear appropriate gloves, eye protection, and a respirator or mask when painting.
- Do not operate or spray near children. Keep children away from equipment at all times.
- Do not overreach or stand on an unstable support. Keep effective footing and balance at all times.
- Stay alert and watch what you are doing.
- Do not operate the unit when fatigued or under the influence of drugs or alcohol.
- Do not kink or over-bend the hose.
- Do not expose the hose to temperatures or to pressures in excess of those specified by Graco.
- Do not use the hose as a strength member to pull or lift the equipment.
- Do not spray with a hose shorter than 25 feet.
- Do not alter or modify equipment. Alterations or modifications may void agency approvals and create safety hazards.
- Make sure all equipment is rated and approved for the environment in which you are using it.

ELECTRIC SHOCK HAZARD

This equipment must be grounded. Improper grounding, setup, or usage of the system can cause electric shock.

- Turn off and disconnect power cord before servicing equipment.
- Connect only to grounded electrical outlets.
- Use only 3-wire extension cords.
- Ensure ground prongs are intact on power and extension cords.
- Do not expose to rain. Store indoors.

PRESSURIZED ALUMINUM PARTS HAZARD

Use of fluids that are incompatible with aluminum in pressurized equipment can cause serious chemical reaction and equipment rupture. Failure to follow this warning can result in death, serious injury, or property damage.

- Do not use 1,1,1-trichloroethane, methylene chloride, other halogenated hydrocarbon solvents or fluids containing such solvents.
- Do not use chlorine bleach.
- Many other fluids may contain chemicals that can react with aluminum. Contact your material supplier for compatibility.

MOVING PARTS HAZARD

Moving parts can pinch, cut, or amputate fingers and other body parts.

- Keep clear of moving parts.
- Do not operate equipment with protective guards or covers removed.
- Pressurized equipment can start without warning. Before checking, moving, or servicing equipment, follow the **Pressure Relief Procedure** and disconnect all power sources.

TOXIC FLUID OR FUMES HAZARD

Toxic fluids or fumes can cause serious injury or death if splashed in the eyes or on skin, inhaled, or swallowed.

- Read MSDSs to know the specific hazards of the fluids you are using.
- Store hazardous fluid in approved containers, and dispose of it according to applicable guidelines.

⚠WARNING

PERSONAL PROTECTIVE EQUIPMENT

Wear appropriate protective equipment when in the work area to help prevent serious injury, including eye injury, hearing loss, inhalation of toxic fumes, and burns. This protective equipment includes but is not limited to:

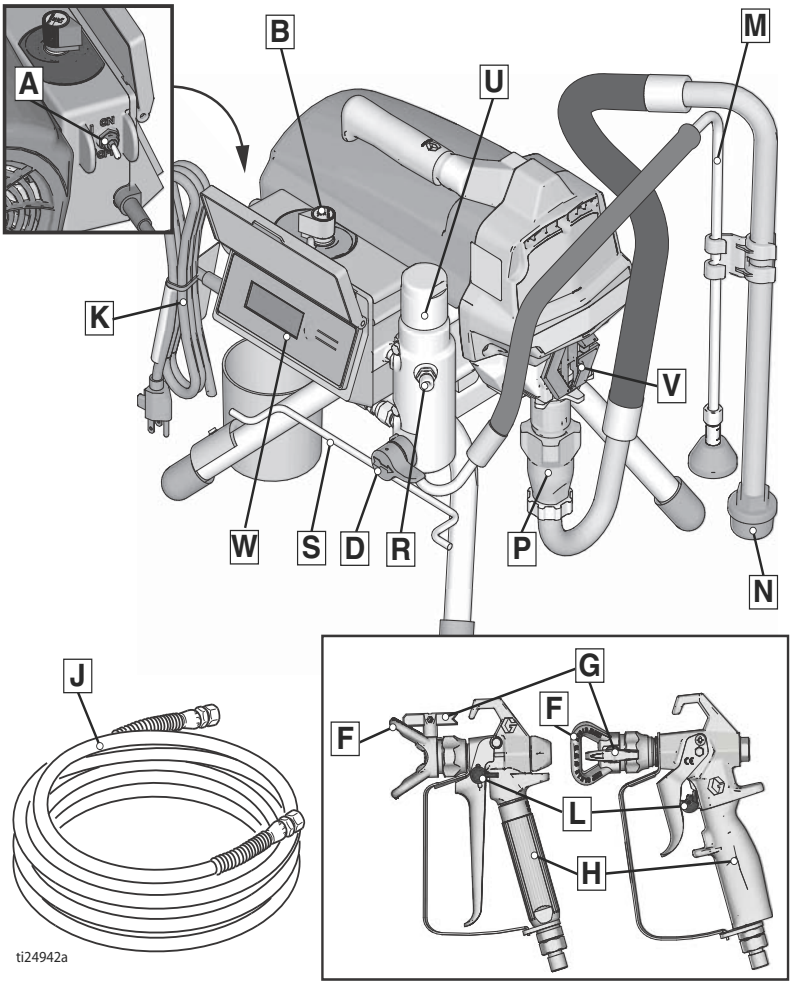
- Protective eyewear, and hearing protection.
- Respirators, protective clothing, and gloves as recommended by the fluid and solvent manufacturer.

CALIFORNIA PROPOSITION 65

This product contains a chemical known to the State of California to cause cancer, birth defects or other reproductive harm. Wash hands after handling.

Component Identification

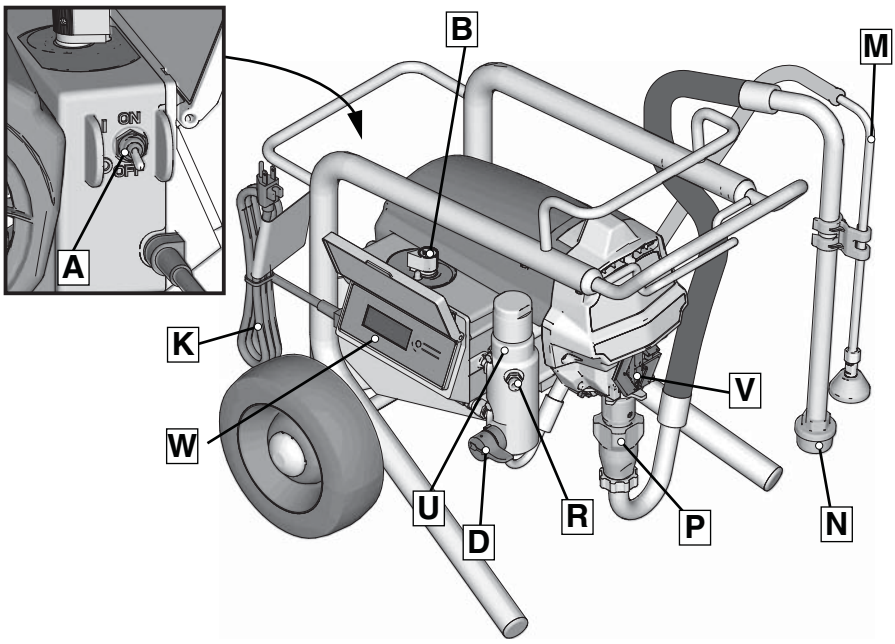
Stand Models

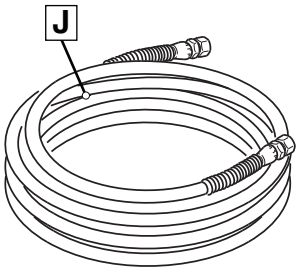


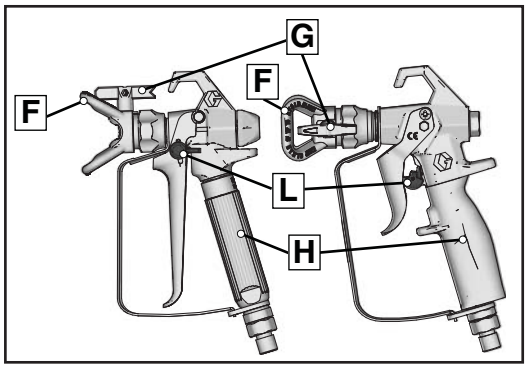
A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock

M	Drain Tube
N	Fluid Intake
P	Pump
R	Fluid Outlet
S	Power Cord Wrap
U	Filter
V	Finger Guard / TSL Fill Point
W	Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Lo-Boy Models







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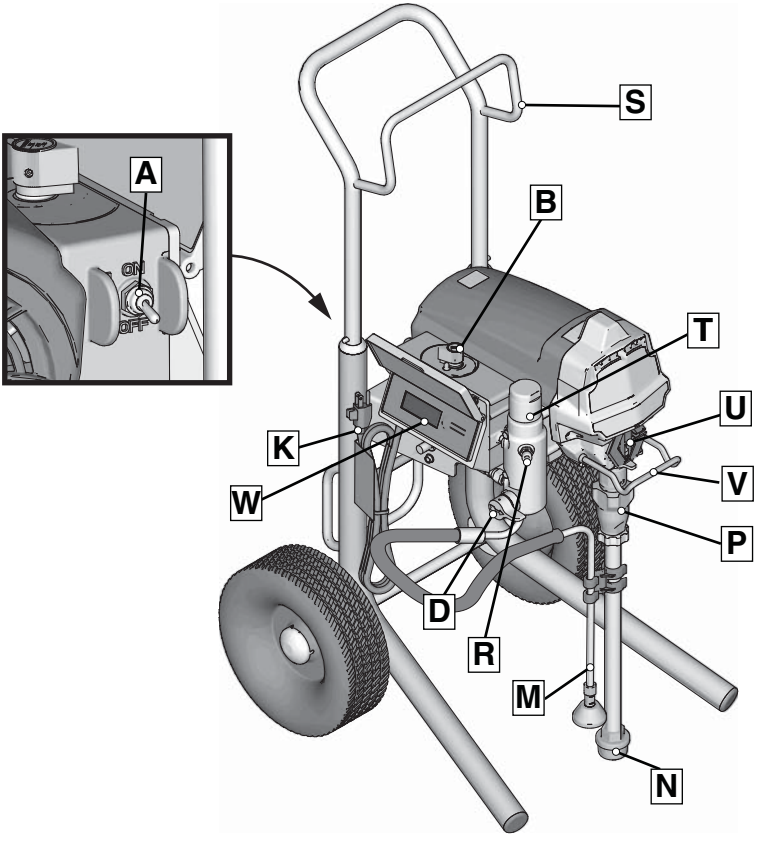
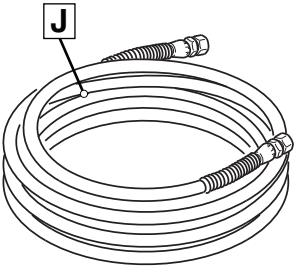
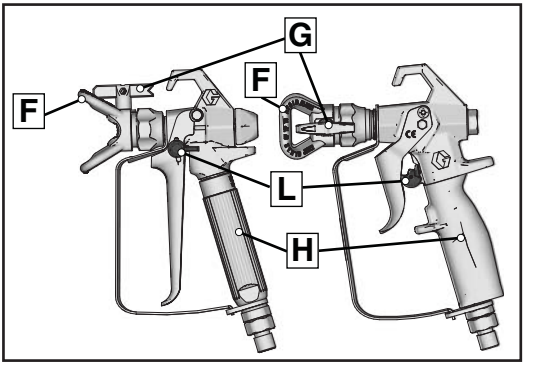
A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock

M	Drain Tube
N	Fluid Intake
P	Pump
R	Fluid Outlet
U	Filter
V	Finger Guard / TSL Fill Point
W	Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Hi-Boy Models







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Hi-Boy Models

A	ON/OFF Switch
B	Pressure Control
D	Prime Valve
F	Tip Guard
G	Spray Tip
H	Gun
J	Airless Hose
K	Power Cord
L	Trigger Lock
M	Drain Tube
N	Fluid Intake

P	Pump
R	Fluid Outlet
S	Hanger
T	Filter
U	Finger Guard / TSL Fill Point
V	Pail Hook
W	Display
	Model/Serial Tag (Not shown, located on bottom of unit.)

Grounding

The equipment must be grounded to reduce the risk of static sparking and electric shock. An electric or static spark can cause fumes to ignite or explode. An improper ground can cause electric shock. A good ground provides an escape wire for the electric current.

This sprayer includes a ground wire with an appropriate ground contact.

The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided; if it does not fit the outlet, have the proper outlet installed by a qualified electrician.

Power Requirements

- 100-120V units require 100-120 VAC, 50/60 Hz, 15A, 1 phase.
- 230V units require 230 VAC, 50/60 HZ, 7A, 1 phase.

Extension Cords

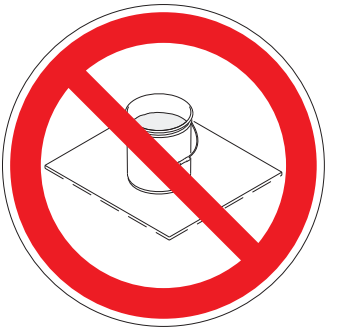
Use an extension cord with an undamaged ground contact. If an extension cord is necessary, use a 3-wire, 12 AWG (2.5 mm^2) minimum.

NOTE: Smaller gauge or longer extension cords may reduce sprayer performance.

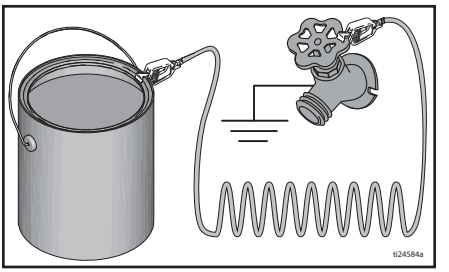
Pails

Solvent and oil-based fluids: follow local code. Use only conductive metal pails, placed on a grounded surface such as concrete.

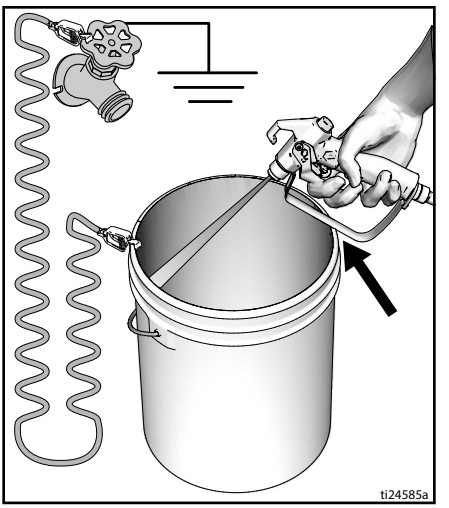
Do not place pail on a non-conductive surface such as paper or cardboard which interrupts grounding continuity.



Always ground a metal pail: connect a ground wire to the pail. Clamp one end to the pail and the other end to a true earth ground such as a water pipe.



To maintain ground continuity when sprayer is flushed or pressure is relieved: hold metal part of spray gun firmly to the side of a grounded metal pail then trigger the gun.

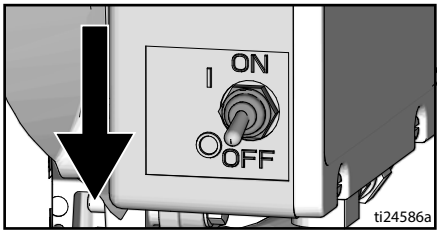


Pressure Relief Procedure

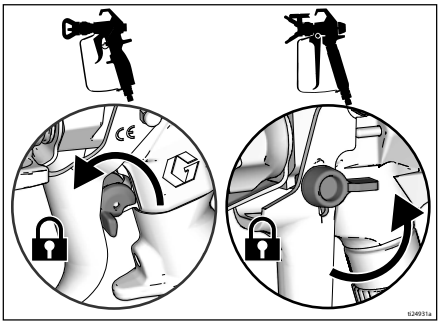
Follow the Pressure Relief Procedure whenever you see this symbol.

This equipment stays pressurized until pressure is manually relieved. To help prevent serious injury from pressurized fluid, such as skin injection, splashed fluid and moving parts, follow the **Pressure Relief Procedure** whenever sprayer is stopped and before sprayer is cleaned or checked, and before equipment is serviced.

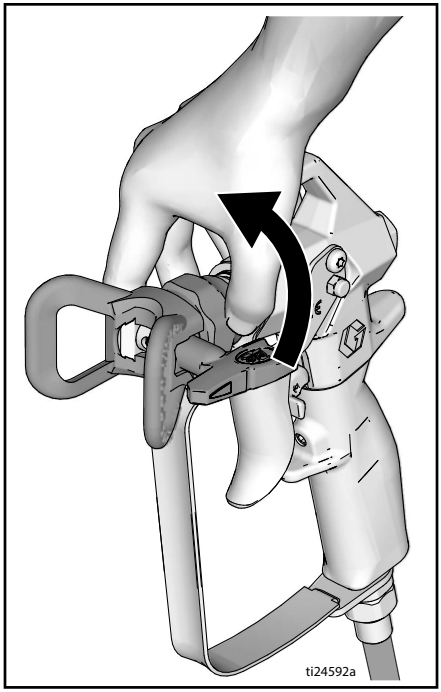
1. Turn ON/OFF switch to **OFF** position. Wait 7 seconds for power to dissipate.



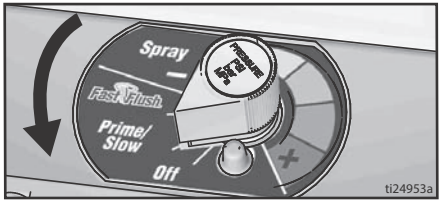
2. Engage trigger lock.



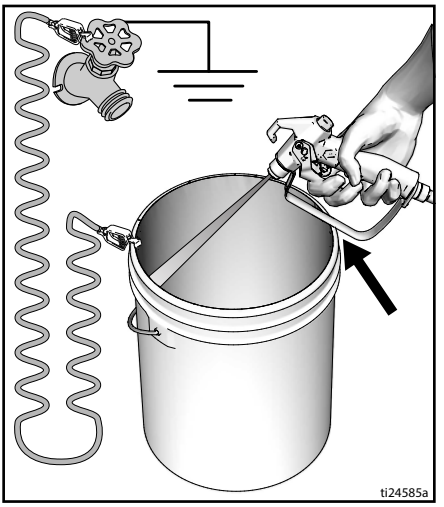
3. Remove tip guard.



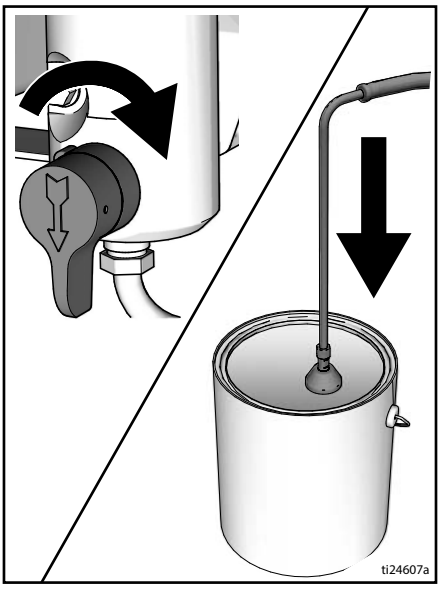
4. Turn pressure control to lowest setting. Disengage trigger lock.



5. Hold a metal part of the gun firmly to a grounded metal pail. Trigger the gun to relieve pressure.



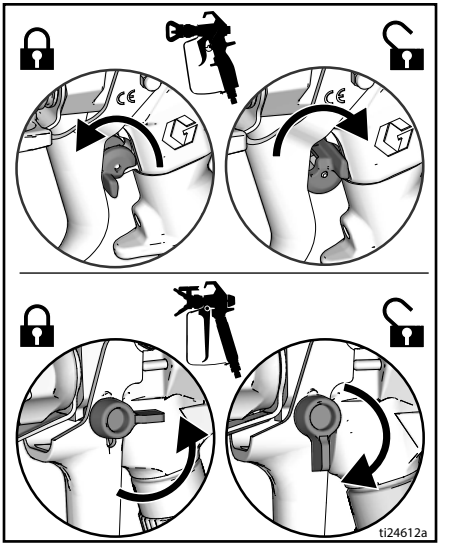
6. Engage trigger lock.
7. Put drain tube in pail. Turn prime valve down. Leave prime valve in down (drain) position until you are ready to spray again.



8. If you suspect the spray tip or hose is clogged or that pressure has not been fully relieved:
   a. VERY SLOWLY loosen tip guard retaining nut or hose end coupling to relieve pressure gradually.
   b. Loosen nut or coupling completely.
   c. Clear hose or tip obstruction.

Trigger Lock

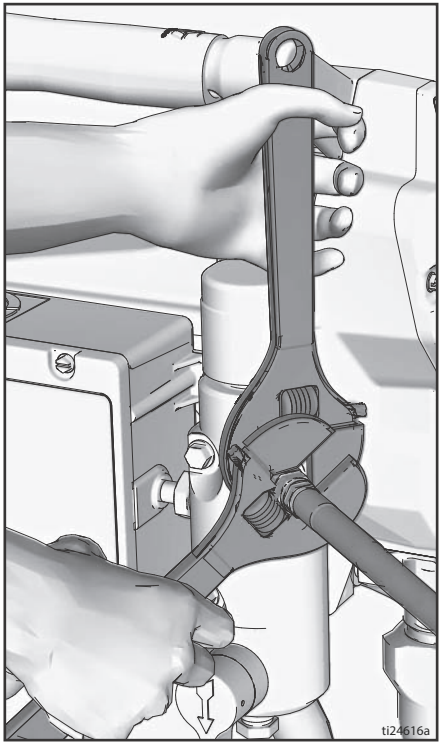
Always engage the trigger lock when sprayer is stopped to prevent the gun from being triggered accidentally by hand or if dropped or bumped.



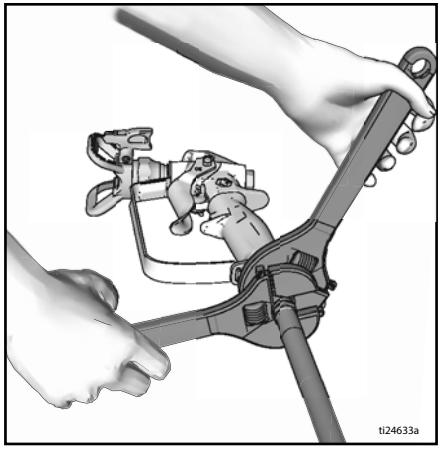
Setup

When unpacking sprayer for the first time or after long term storage perform setup procedure. When first setup is performed remove shipping plug from fluid outlet.

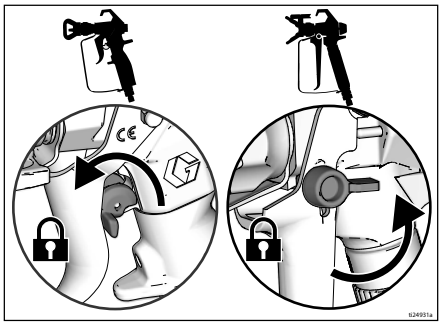
1. Connect Graco airless hose to fluid outlet. Use wrenches to tighten securely.



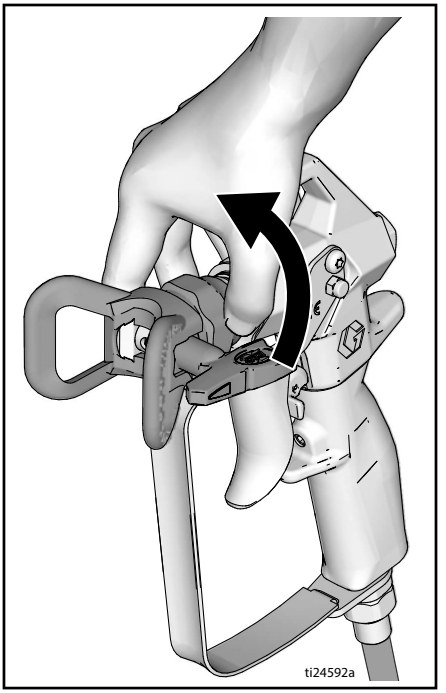
2. Connect other end of hose to gun.



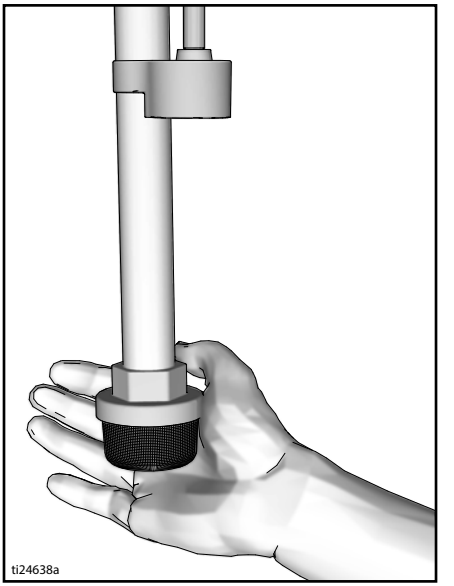
3. Use wrenches to tighten securely.
4. Engage trigger lock.



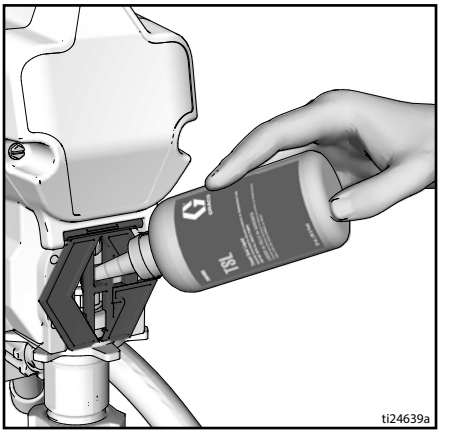
5. Remove tip guard.



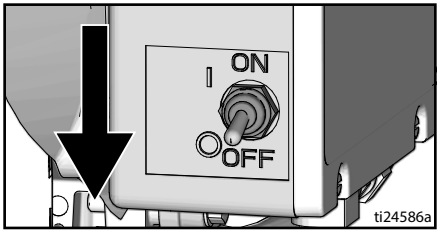
6. When unpacking sprayer for the first time remove packaging materials from inlet strainer. After long term storage check inlet strainer for clogs and debris.



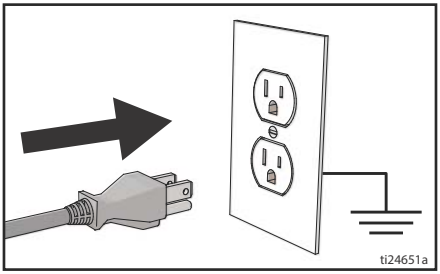
7. Fill throat packing nut with TSL to prevent premature packing wear. Do this daily or each time you spray.
   a. Place the TSL bottle nozzle into the top center opening in the grill at the front of the sprayer.
   b. Squeeze bottle to dispense enough TSL to fill the space between the pump rod and packing nut seal.



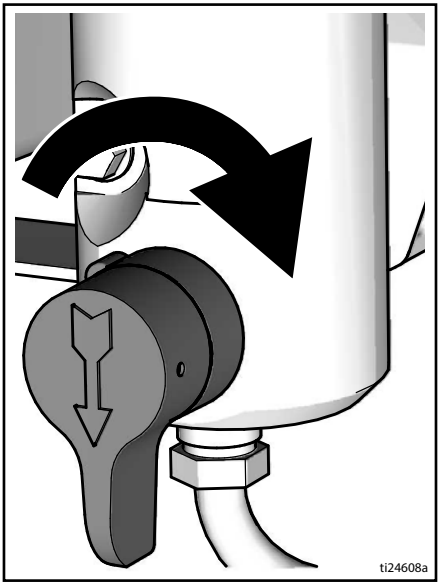
8. Make certain ON/OFF switch is **OFF**.



9. Plug power supply cord into a properly grounded electrical outlet.



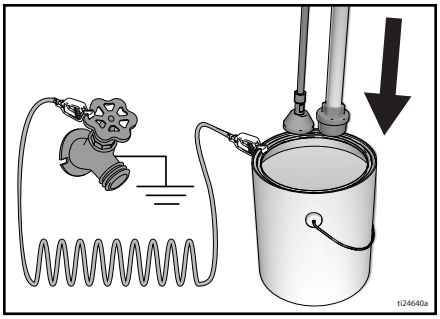
10. Turn prime valve down.



11. Place fluid intake with drain tube in grounded metal pail partially filled with flushing fluid. See **Grounding**, page 12.

NOTE: New sprayers are shipped with storage fluid that must be flushed out with mineral spirits prior to using the sprayer.

Check flushing fluid for compatibility with material that is to be sprayed. A secondary flush with a compatible fluid may be necessary. Water for latex paint or mineral spirits for oil-based paint.

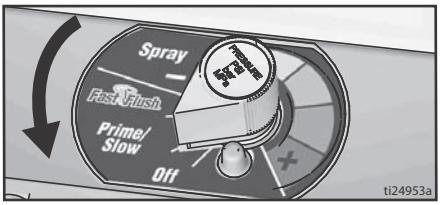


12. Turn pressure control to OFF.
13. Turn ON/OFF switch to **ON** position.
14. Turn prime valve horizontal. Disengage trigger lock.
15. Turn pressure control to Prime/Slow.
16. Hold a metal part of the gun firmly to a grounded metal pail. Trigger gun and flush for one minute.
17. Turn ON/OFF switch to **OFF** position.
18. Engage trigger lock.
19. After flushing storage fluid out of the sprayer empty pail. Replace fluid intake with drain tube in grounded metal pail partially filled with flushing fluid. Use water to flush water-based paint or mineral spirits to flush oil-based paint.
20. Turn ON/OFF switch to **ON** position.
21. Turn prime valve horizontal. Disengage trigger lock.

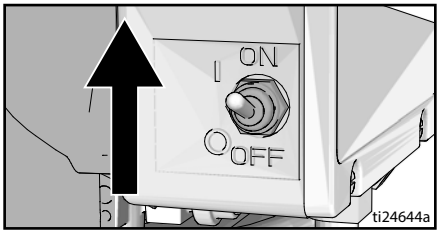
22. Hold a metal part of the gun firmly to a grounded metal pail. Trigger gun and flush until clean.
23. Turn ON/OFF switch to **OFF** position.
24. Engage trigger lock.
25. Sprayer is now ready to startup and spray.

Startup

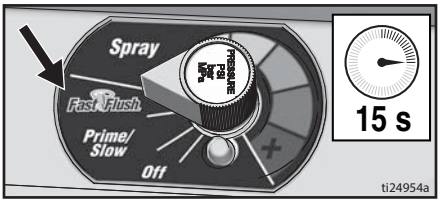
1. Perform **Pressure Relief Procedure**, page 13.
2. Turn pressure control to lowest pressure.



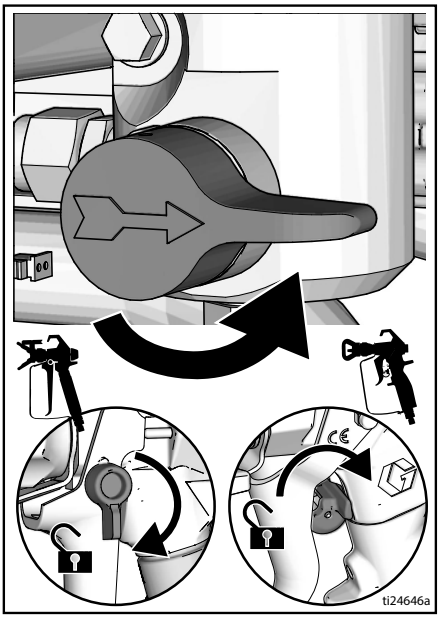
3. Turn ON/OFF switch to **ON** position.



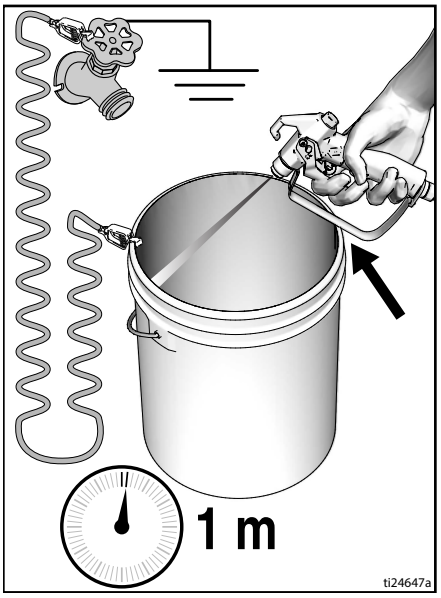
4. Place fluid intake in paint pail. Place drain tube in waste pail.
5. Turn pressure control to Fast Flush to start motor. Allow paint to circulate through drain tube for 15 seconds.



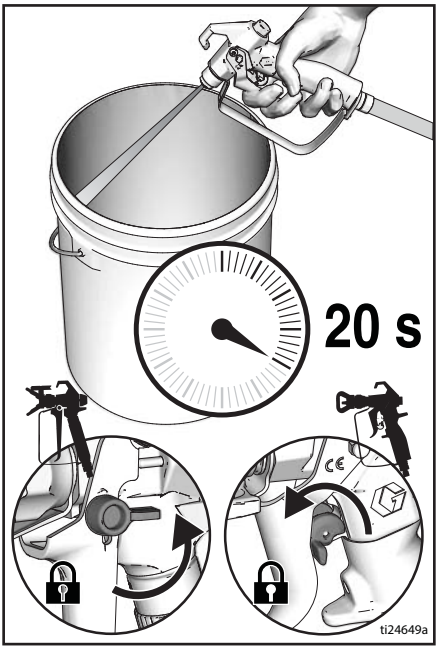
6. Turn prime valve horizontal. Disengage trigger lock.



7. Hold gun against grounded metal waste pail. Trigger gun until paint appears.



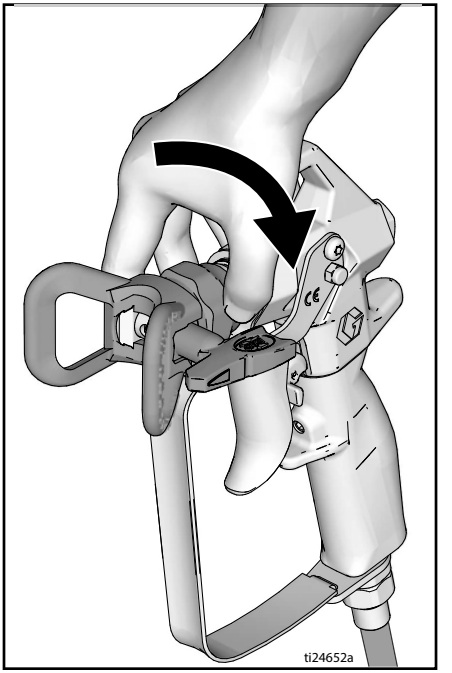
8. Move gun to paint pail and trigger for 20 seconds. Release trigger and allow sprayer to build pressure. Engage trigger lock.



High-pressure spray is able to inject toxins into the body and cause serious bodily injury. Do not stop leaks with hand or rag.

9. Inspect for leaks. If leaks occur, perform **Pressure Relief Procedure**, page 13, then tighten all fittings and repeat Startup procedure. If there are no leaks continue with the next step.

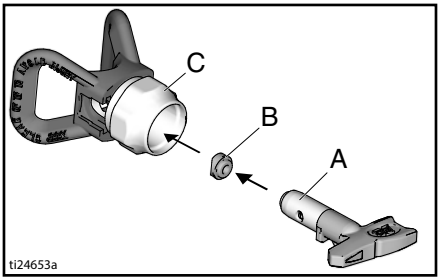
10. Screw tip assembly onto gun and tighten. See **Spray Tip Installation**, page 21. For gun assembly instructions, see separate gun manual.



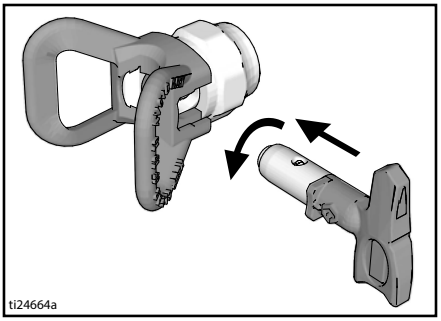
Operation

Spray Tip Installation

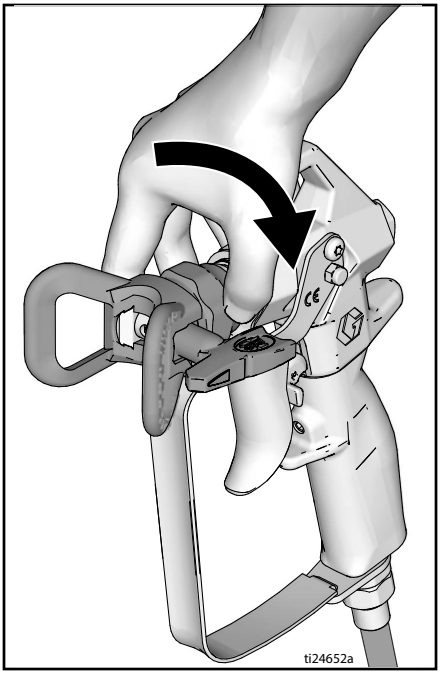
1. Perform **Pressure Relief Procedure**, page 13.
2. Use spray tip (A) to insert OneSeal™ (B) into tip guard (C).



2. Insert Spray Tip.

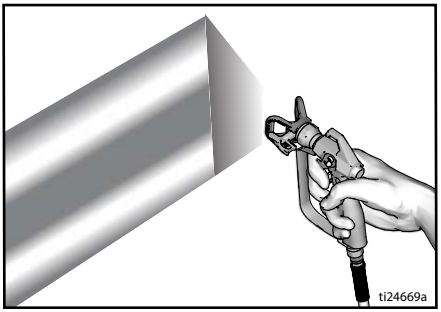


3. Screw assembly onto gun. Tighten.

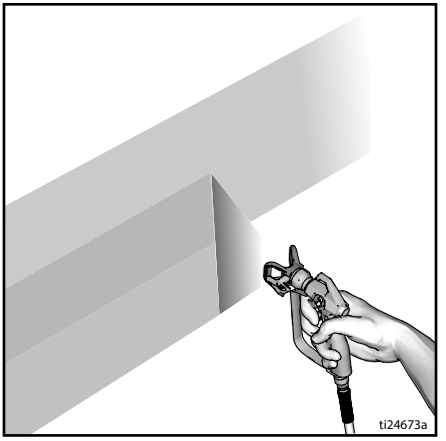


Spray

1. Spray test pattern. Adjust pressure to eliminate heavy edges.



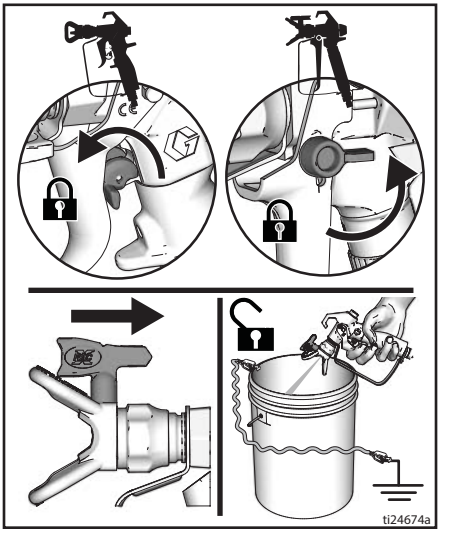
2. Use smaller tip size if pressure adjustment cannot eliminate heavy edges.
3. Hold gun perpendicular, 10-12 in. (25-30 cm) from surface. Spray back and forth; overlap by 50%.



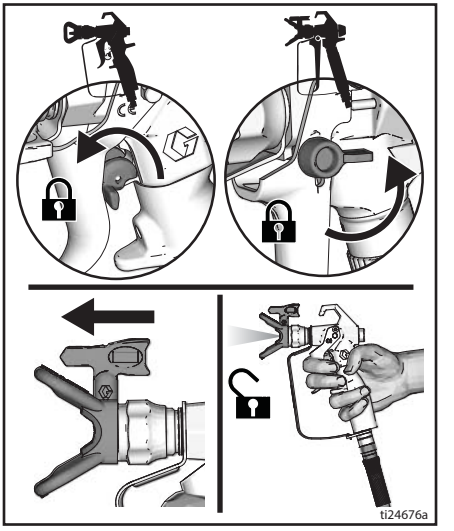
4. Trigger gun after moving. Release trigger before stopping. For additional spraying information, see separate gun manual.

Clear Tip Clog

1. Release trigger. Engage trigger lock. Rotate Spray Tip. Disengage trigger lock. Trigger gun at waste area to clear clog.



2. Engage trigger lock. Return Spray Tip to original position. Disengage trigger lock and continue spraying.

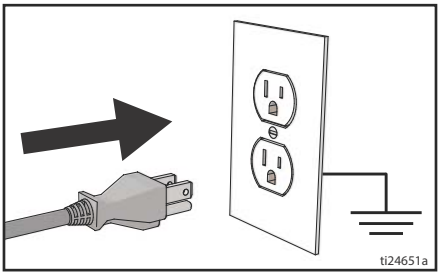


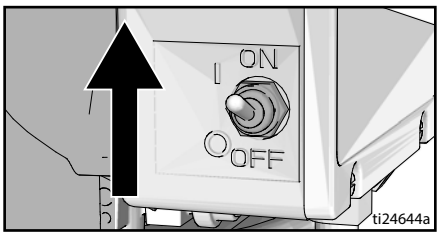
Digital Display

Most models are equipped with a digital display. This section explains how to use this feature.

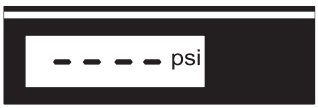
Pressure Display

1. Perform **Pressure Relief Procedure**, page 13.
2. Plug sprayer into grounded outlet. Turn ON/OFF switch to **ON** position.





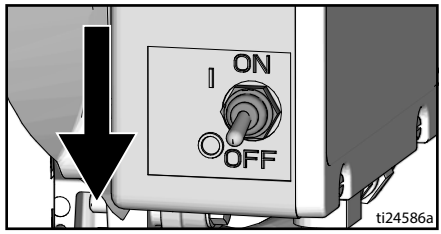
3. The pressure is displayed. Dashes indicate pressure is less than 200 psi (14 bar, 1.4 MPa).



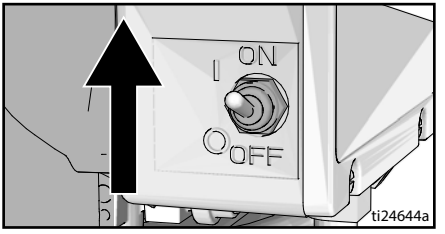
4. Press and hold display button to change pressure units (psi, bar, or MPa).

Stored Data Display

1. Turn ON/OFF switch to **OFF** position.



2. To enter Stored Data Mode, press and hold display button and turn ON/OFF switch to **ON** position.



3. Sprayer model number is displayed followed by Data Point 1 which is the unit power on time in hours.

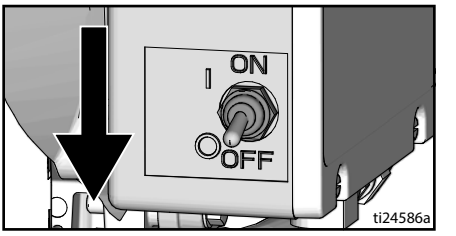
4. Press display button again to display Data Point 2. Motor run time in hours is displayed.

5. Press display button again to display Data Point 3. This will be the last error code.

6. To erase last error code, press and hold display button.
7. Press display button again to display Data Point 4. The software revision is displayed.

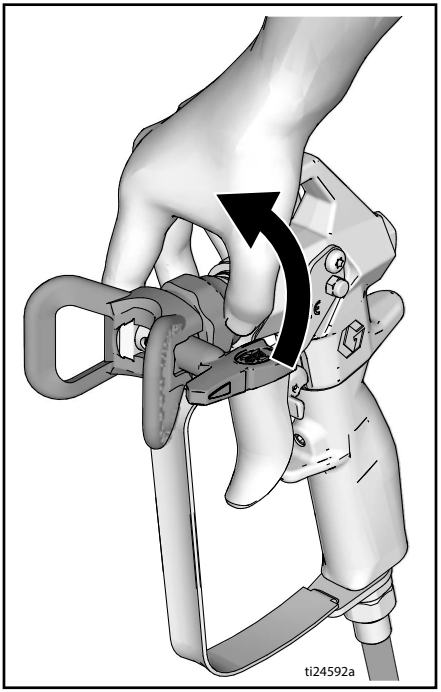
8. Press display button again to return to Data Point 1.

9. Turn ON/OFF switch to **OFF** position to exit Stored Data.



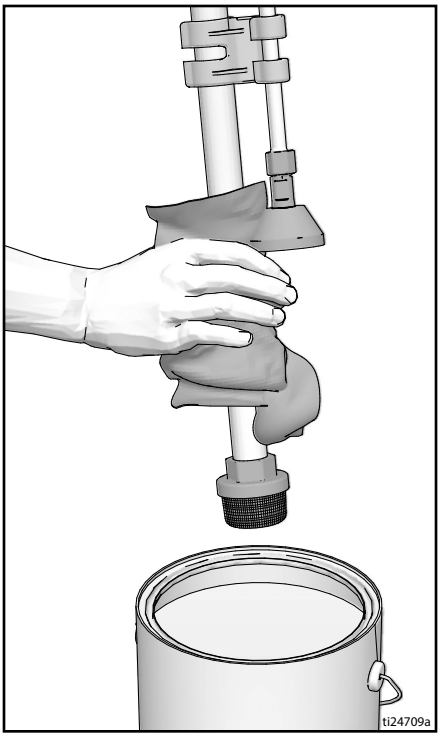
Cleanup

1. Perform **Pressure Relief Procedure**, page 13.
2. Remove tip guard and Spray Tip. For additional information, see separate gun manual.

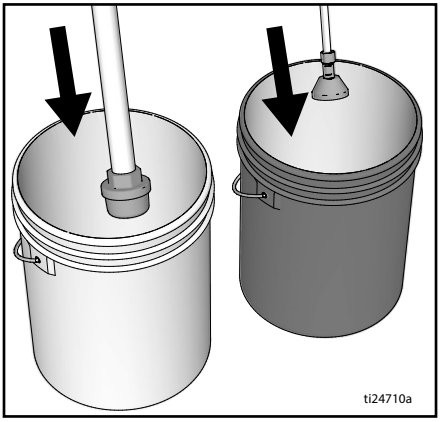


Fast Flush Drain Tube

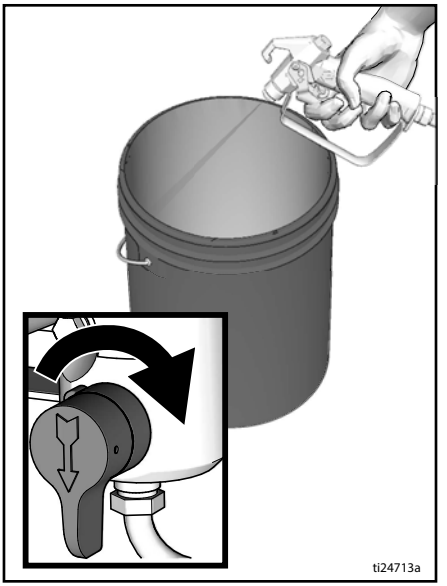
3. Remove fluid intake and drain tube from paint, wipe excess paint off outside.



4. Place fluid intake in flushing fluid. Use water for water base paint and mineral spirits for oil-based paint. Place drain tube in waste pail.



5. To flush drain tube and pump turn prime valve down.

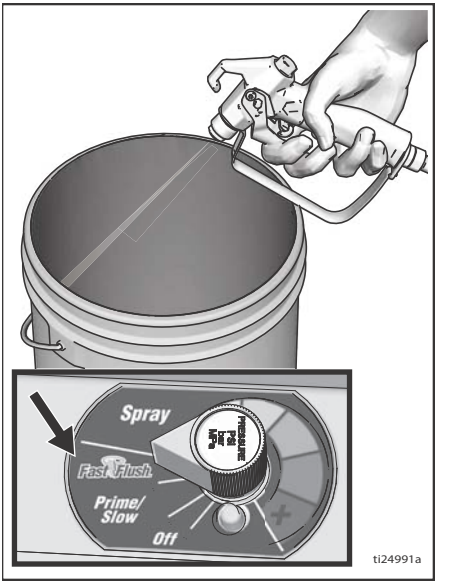


6. Turn pressure control to Fast Flush operate until the pump runs steady and flushing fluid appears in the waste pail.

Fast Flush Hose and Gun

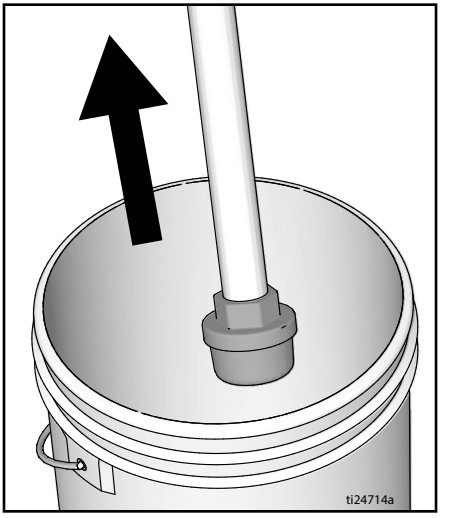
7. To flush airless hose and spray gun, turn prime valve horizontal.

8. Hold gun against waste pail. Disengage trigger lock. Trigger gun and turn pressure control to Fast Flush operate until the pump runs steady and flushing fluid appears.

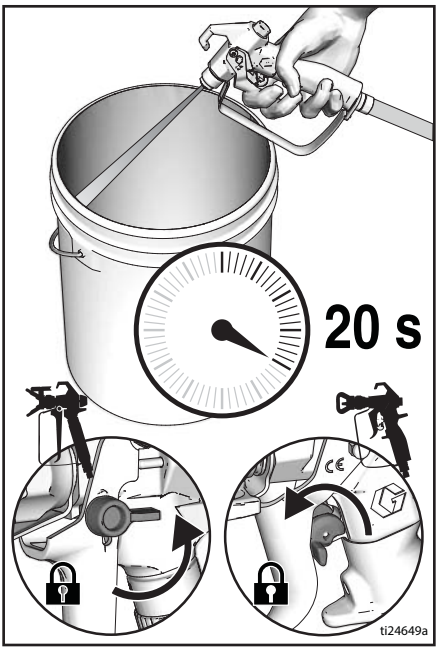


9. Stop triggering gun.

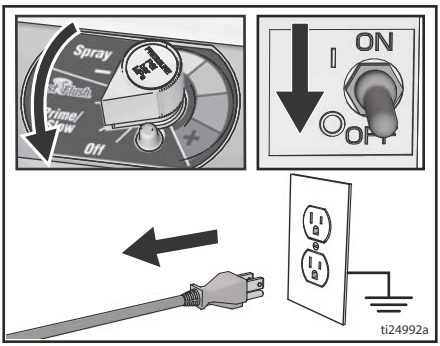
10. Raise fluid intake above flushing fluid.



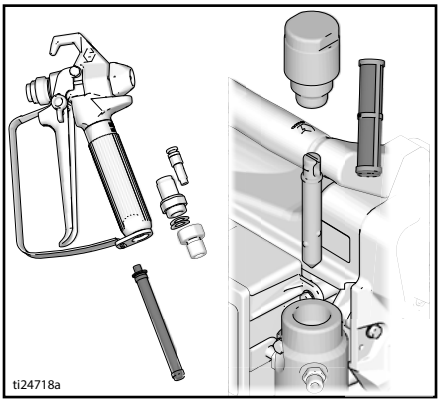
11. With prime valve horizontal. Trigger gun into flushing pail to purge fluid from hose.
12. Engage trigger lock.



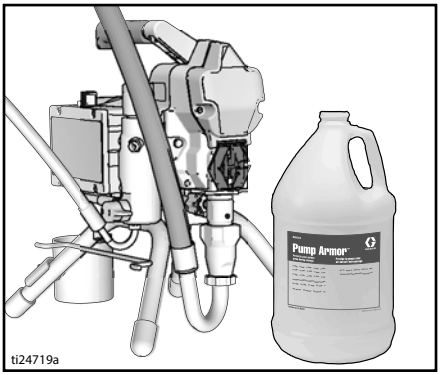
13. Turn pressure control knob to OFF and turn ON/OFF switch to **OFF** position. Disconnect power to sprayer.



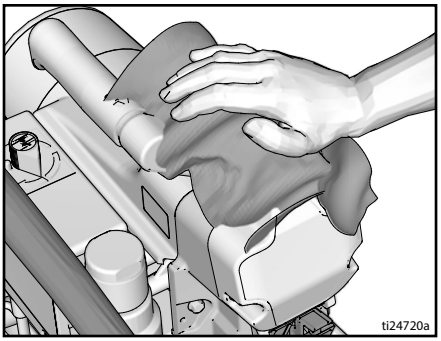
14. Remove filter from gun and sprayer if installed. Clean and inspect. Install filter. See separate gun manual.



15. If flushing with water, flush again with mineral spirits or Pump Armor to leave a protective coating to prevent freezing or corrosion.



16. Wipe sprayer, hose and gun with a rag soaked in water or mineral spirits.



Maintenance

Routine maintenance is important to ensure proper operation of your sprayer. Maintenance includes performing routine actions which keep your sprayer in operation and prevents trouble in the future.

Activity	Interval
Inspect/clean sprayer filter, fluid inlet strainer, and gun filter.	Daily or each time you spray
Inspect motor shield vents for blockage.	Daily or each time you spray
Fill TSL by adding through TSL fill point.	Daily or each time you spray
Inspect motor brushes for wear. Brushes must be 1/2 in. (13mm) minimum length. NOTE: Brushes do not wear at the same rate on both sides of motor. Check both brushes.	Every 1000 gallons (3785 liters)
Check sprayer stall. With sprayer gun NOT triggered, sprayer motor should stall and not restart until gun is triggered again. If sprayer starts again with gun NOT triggered, inspect pump for internal/external leaks and check prime valve for leaks.	Every 1000 gallons (3785 liters)
Throat packing adjustment When pump packing begins to leak after extended use, tighten packing nut down until leakage stops or lessens. This allows approximately 100 gallons of additional operation before a repacking is required. Packing nut can be tightened without 0-ring removal.	As necessary based on usage

Troubleshooting

Mechanical/Fluid Flow

1. Follow **Pressure Relief Procedure**, page 13, before checking or repairing.
2. Check all possible problems and causes before disassembling the unit.

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
For units with display: E=0X is displayed. **For units with no display:** Control board status light is blinking or the light is off and there is power to the sprayer.	Fault condition exists.	Determine fault correction from **Electrical**, page 32.
Pump output is low	Spray tip worn.	Follow **Pressure Relief Procedure**, page 13, then replace tip. See separate gun or tip manual.
	Spray tip clogged.	Relieve pressure. Check and clean spray tip.
	Paint supply.	Refill and reprime pump.
	Intake strainer clogged.	Remove and clean, then reinstall.
	Intake valve ball and piston ball are not seating properly.	Remove intake valve and clean. Check balls and seats for nicks; replace if necessary. See pump manual. Strain paint before using to remove particles that could clog pump.
	Fluid filter or tip filter is clogged or dirty.	Clean filter.
	Prime valve leaking.	Follow **Pressure Relief Procedure**, page 13, then repair prime valve.
	Verify pump does not continue to stroke when gun trigger is released. (Prime valve not leaking.)	Service pump. See pump manual.
	Leaking around throat packing nut which may indicate worn or damaged packings.	Replace packings. See pump manual. Also check piston valve seat for hardened paint or nicks and replace if necessary. Tighten packing nut/wet-cup.

Troubleshooting

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
Pump output is low	Pump rod damage.	Repair pump. See pump manual.
	Low stall pressure.	Turn pressure knob fully clockwise. Make sure pressure control knob is properly installed to allow full clockwise position. If problem persists, replace pressure transducer.
	Piston packings are worn or damaged.	Replace packings. See pump manual.
	O-ring in pump is worn or damaged.	Replace o-ring. See pump manual.
	Intake valve ball is packed with material.	Clean intake valve. See pump manual.
	Large pressure drop in hose with heavy materials.	Reduce overall length of hose.
	Check extension cord for correct size.	See **Extension Cords**, page 12.
	Loose motor brushes and terminals.	Tighten terminal screws. Replace brushes if leads are damaged.
	Worn motor brushes. (Brushes must be 1/2 in. [13mm] minimum length.)	Replace brushes.
	Broken and misaligned motor brush springs. Rolled portion of spring must rest squarely on top of brush.	Replace spring if broken. Realign spring with brush.
	Motor brushes are binding in brush holders.	Clean brush holders, remove carbon dust with a small cleaning brush. Align brush lead with slot in brush holder to assure free vertical brush movement.
Motor runs but pump does not stroke	Connecting rod assembly damaged. See pump manual.	Replace connecting rod assembly. See pump manual.
	Gears or drive housing damaged.	Inspect drive housing assembly and gears for damage and replace if necessary.
Excessive paint leakage into throat packing nut	Throat packing nut is loose.	Remove throat packing nut spacer. Tighten throat packing nut just enough to stop leakage.
	Throat packings are worn or damaged.	Replace packings. See pump manual.
	Displacement rod is worn or damaged.	Replace rod. See pump manual.

Problem	What to Check If check is OK, go to next check	What to Do When check is not OK, refer to this column
Fluid is spitting from gun	Air in pump or hose.	Check and tighten all fluid connections. Cycle pump as slowly as possible during priming.
	Spray tip is partially clogged.	Clear tip. See **Clear Tip Clog**, page 22.
	Fluid supply is low or empty.	Refill fluid supply. Prime pump. See pump manual. Check fluid supply often to prevent running pump dry.
Pump is difficult to prime	Air in pump or hose.	Check and tighten all fluid connections. Cycle pump as slowly as possible during priming.
	Intake valve is leaking.	Clean intake valve. Be sure ball seat is not nicked or worn and that ball seats well. Reassemble valve.
	Pump packings are worn.	Replace pump packings. See pump manual.
	Paint is too thick.	Thin the paint according to supplier recommendations.
Sprayer operates for 5 to 10 minutes then stops	Pump packing nut too tight. When pump packing nut is too tight the packings on the pump rod restrict pump action and overloads the motor.	Loosen pump packing nut. Check for leaks around throat. If necessary, replace pump packings. See Pump manual.

Electrical

Symptom: Sprayer does not run, stops running, or will not shut off.

Perform **Pressure Relief Procedure**, page 13.

1. Plug sprayer into correct voltage, grounded outlet.
2. Turn the ON/OFF switch **OFF** wait 30 seconds and then turn power back **ON** again (this ensures sprayer is in normal run mode).
3. Turn pressure control knob clockwise 1/2 turn.
4. View digital display or remove control box cover to view control board status light. To determine which code (or any other code besides voltage supply) refer to the control board status light. Turn the ON/OFF switch **OFF**, remove the control cover then turn power back **ON**. Observe the status light. Blinking LED total count equals the error code (for example: two blinks equals CODE 02).Press display button to restart code messages.

Keep clear of electrical and moving parts during troubleshooting procedures. To avoid electrical shock hazards when covers are removed for troubleshooting, wait 7 seconds after disconnecting power cord for stored electricity to dissipate.

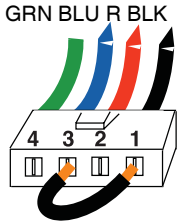
Error Code Messages

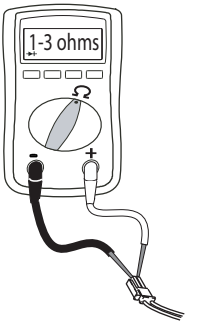
CODE	MESSAGE	ACTION
02	HIGH PRESSURE DETECTED - RELIEVE PRESSURE	Check for clogs. Use only Graco spray hoses, use a minimum of 50ft/15m.
03	PRESSURE TRANSDUCER NOT DETECTED	Check transducer connection.
05	MOTOR NOT SPINNING	Check for mechanical failure and check motor connections. Material may be too thick, thin material.
06	MOTOR OVERHEATED	Turn sprayer OFF. Check motor connections. Check shroud vents for blockage. Sprayer may take up to an hour to cool.

Problem	What to Check	How to check
Sprayer does not run at all AND Display is blank OR Control board status light never lights	See flow chart, page 38.	
Sprayer does not shut off AND Displays Code 02 message OR Control board status light blinks 2 times repeatedly	Control board.	Replace control board.
Sprayer does not run at all AND Displays Code 02 message OR Control board status light blinks 2 times repeatedly	Check transducer or transducer connections	Make sure there is no pressure in the system (see **Pressure Relief Procedure**, page 13). Check fluid path for clogs, such as clogged filter. Use airless paint spray hose with no metal braid. A small hose or metal braid hose may result in high-pressure spikes. Turn ON/OFF switch **OFF** and disconnect power to sprayer. Check transducer and connections to control board. Disconnect transducer from control board socket. Check that transducer and control board contacts are clean and secure. Reconnect transducer to control board socket. Connect power, turn ON/OFF switch **ON** and control knob 1/2 turn clockwise. If sprayer does not run properly, turn ON/OFF switch **OFF** and go to next step. Install new transducer. Connect power, turn ON/OFF switch **ON** and control knob 1/2 turn clockwise. Replace control board if sprayer does not run properly.

Troubleshooting

Problem	What to Check	How to check
Sprayer does not run at all AND Displays Code 03 message OR Control board status light blinks 3 times repeatedly	Check transducer or transducer connections (control board is not detecting a pressure signal).	Turn ON/OFF switch **OFF** and disconnect power to sprayer. Check transducer and connections to control board. Disconnect transducer from control board socket. Check to see if transducer and control board contacts are clean and secure. Reconnect transducer to control board socket. Connect power, turn ON/OFF switch **ON** and control knob to 1/2 turn clockwise. If sprayer does not run, turn ON/OFF switch **OFF** and go to next step. Connect a confirmed working transducer to control board socket. Turn ON/OFF switch **ON** and control knob to 1/2 turn clockwise. If sprayer runs, install new transducer. Replace control board if sprayer does not run. Check transducer resistance with an ohmmeter (less than 9k ohm between red and black wires and 3-6k ohm between green and yellow wires).
Sprayer does not run at all AND Displays Code 05 message OR Control board status light blinks 5 times repeatedly	Control is commanding motor to run but motor shaft does not rotate. Possibly locked rotor condition, an open connection exists between motor and control, there is a problem with motor or control board, or motor amp draw is excessive.	1. Remove pump and try to run sprayer. If motor runs, check for locked or frozen pump or drive train. If sprayer does not run, continue to step 2. 2. Turn ON/OFF switch **OFF** and disconnect power to sprayer. 3. Disconnect motor connector(s) from control board socket(s). Check that motor connector and control board contacts are clean and secure. If contacts are clean and secure, continue to step 4. 4. Set sprayer to OFF and spin motor fan 1/2 turn. Restart sprayer. If sprayer runs replace control board. If sprayer does not run, continue to step 5.

Problem	What to Check	How to check
		5.Perform Spin Test: Test at large 4-pin motor field connector. Disconnect fluid pump from sprayer. Test motor by placing a jumper across pins 1 & 2. Rotate motor fan at about 2 revolutions per second. A cogging resistance to motion should be felt at the fan. The motor should be replaced if no resistance is felt. Repeat for pin combinations 1 & 3 and 2 & 3. Pin 4 (the green wire) is not used in this test. If all spin test is positive, continue to step 6. **STEP 1:** **STEP 2:**  **STEP 3:**

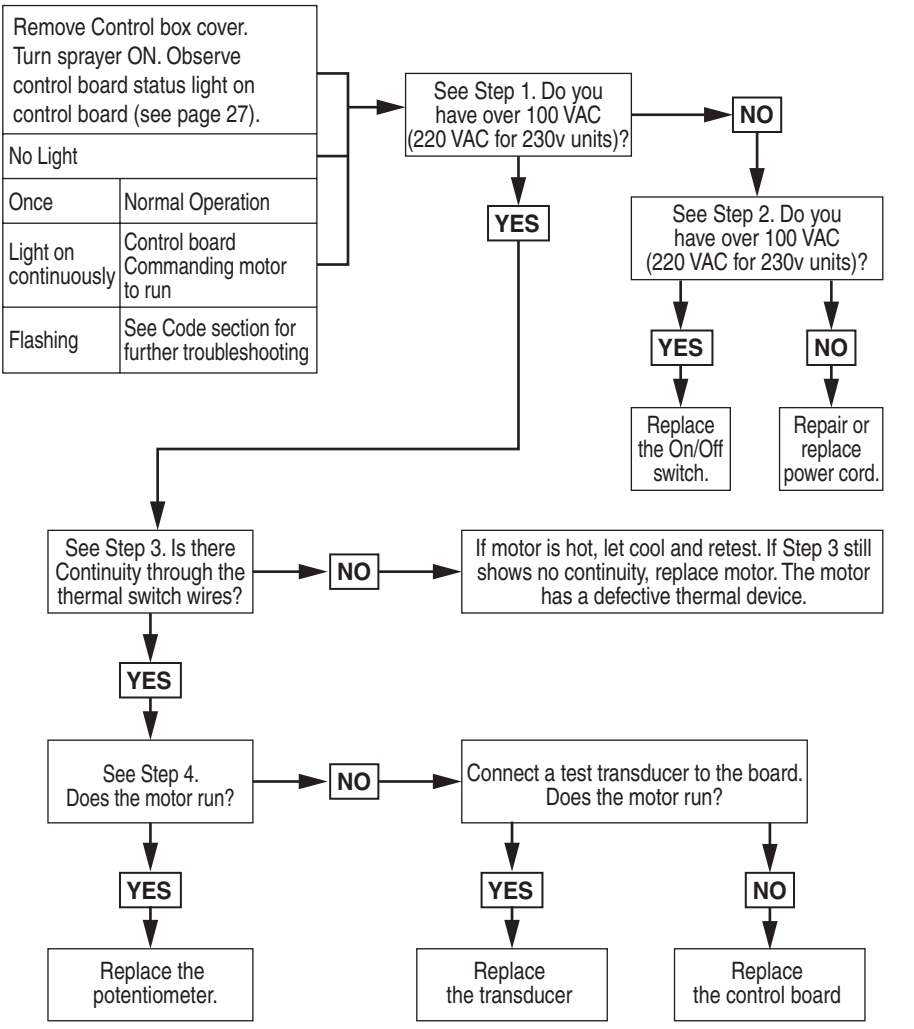
Problem	What to Check	How to check
		6.Perform Field Short Test: Test at large 4-pin motor field connector. There should not be continuity from pin 4, the ground wire, and any of the remaining 3 pins. If motor field connector tests fail, replace motor. 7.Check Motor Thermal Switch: Unplug thermal wires. Set meter to ohms. Meter should read 100k ohms.  8.Reconnect motor connector(s) to control board socket(s). Connect power, turn ON/OFF switch **ON** and control knob to 1/2 turn clockwise. If motor does not run, replace control board.

Problem	What to Check	How to check
Sprayer does not run at all AND Displays Code 06 message OR Control board status light blinks 6 times repeatedly	Motor is hot or there is a fault in the motor thermal device.	Allow sprayer to cool. If sprayer runs when cool, correct cause of overheating. Keep sprayer in cooler location with good ventilation. Make sure motor air intake is not blocked. If sprayer still does not run, replace motor. **NOTE:** Motor must be cooled down for the test. 1. Check thermal device connector (yellow wires) at control board. 2. Disconnect thermal device connector from control board socket. Make sure contacts are clean and secure. Measure resistance of the thermal device. If reading is not correct, replace motor. **Check Motor Thermal Switch:** Unplug thermal wires. Set meter to ohms. Meter should read 100k ohms. 3. Reconnect thermal device connector to control board socket. Connect power, turn sprayer ON and control knob 1/2 turn clockwise. If sprayer does not run, replace control board.
Basic electrical problems	Motor leads are securely fastened and properly mated	Replace loose terminals; crimp to leads. Be sure terminal are firmly connected. Clean circuit board terminals. Securely reconnect leads.
	For loose motor brush lead connections and terminals.	Tighten terminal screws. Replace brushes if leads are damaged.
	Brushes must be 1/2 in. [13mm] minimum length. NOTE: Brushes do not wear at the same rate on both sides of motor. Check both brushes.	Replace brushes.
	Broken or misaligned motor brush springs. Rolled portion of spring must rest squarely on top of brush.	Replace spring if broken. Realign spring with brush.
	Motor brushes may be binding in brush holders.	Clean brush holders. Remove carbon with small cleaning brush. Align brush leads with slot in brush holder to assure free vertical brush movement.
	Motor armature commutator for burn spots, gouges or extreme roughness.	Remove motor and have motor shop resurface commutator if possible.

Sprayer Will Not Run

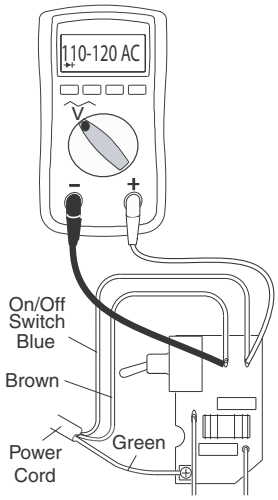
(See following page for steps)

Sprayer Will Not Run
(see following pages for steps)

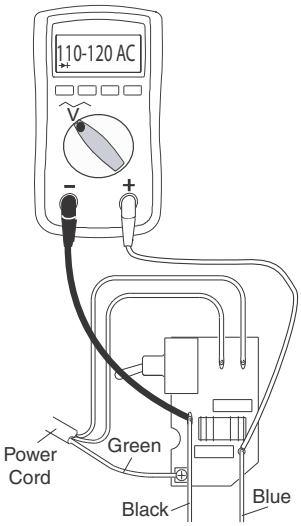

Remove Control box cover. Turn sprayer ON. Observe control board status light on control board (see page 27).
No Light
Once
Normal Operation
Light on continuously
Control board Commanding motor to run
Flashing
See Code section for further troubleshooting
See Step 1. Do you have over 100 VAC (220 VAC for 230v units)?
NO
YES
See Step 2. Do you have over 100 VAC (220 VAC for 230v units)?
YES
NO
Replace the On/Off switch.
Repair or replace power cord.
See Step 3. Is there Continuity through the thermal switch wires?
NO
If motor is hot, let cool and retest. If Step 3 still shows no continuity, replace motor. The motor has a defective thermal device.
YES
See Step 4. Does the motor run?
NO
Connect a test transducer to the board. Does the motor run?
YES
YES
NO
Replace the potentiometer.
Replace the transducer
Replace the control board

ti24726a

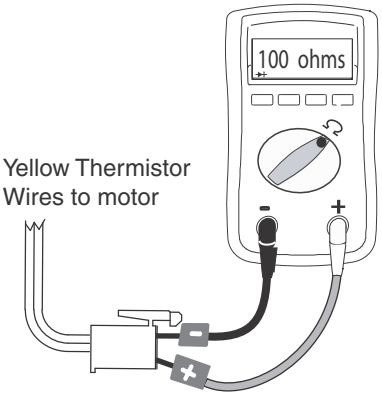
Step 1:
Plug Power cord in and turn switch ON. Connect probes to ontrol board. Turn meter to AC Volts.



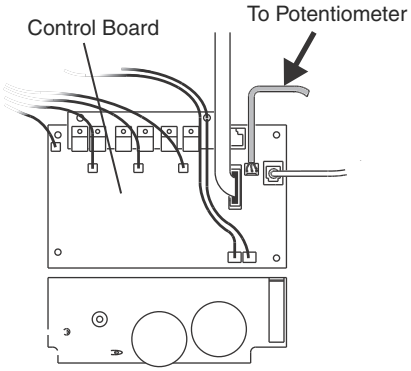
Step 2:
Plug Power cord in and turn switch ON. Connect probes to control board. Turn meter to AC Volts



Step 3:
Check motor thermal switch. Unplug yellow wires. Meter should read 100 ohms. NOTE: Motor should be cool during reading.



Step 4:
Disconnect potentiometer. Plug power cord in and turn switch ON.



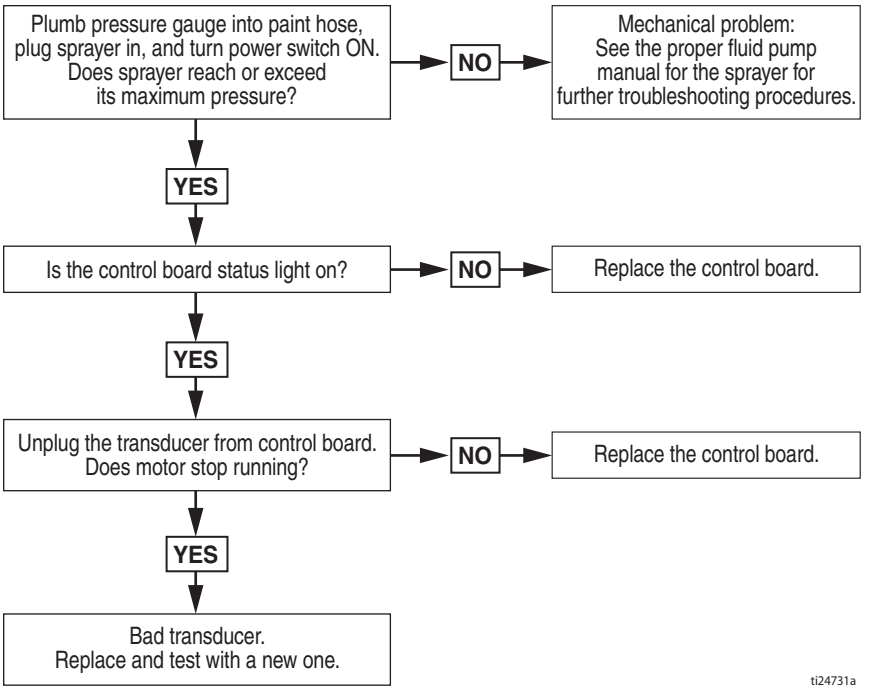
ti24084a

Sprayer Will Not Shut Off

1. Perform **Pressure Relief Procedure**, page 13. Leave prime valve open (down) and turn ON/OFF switch **OFF**.
2. Remove control box cover so the control board status light can be viewed if available.

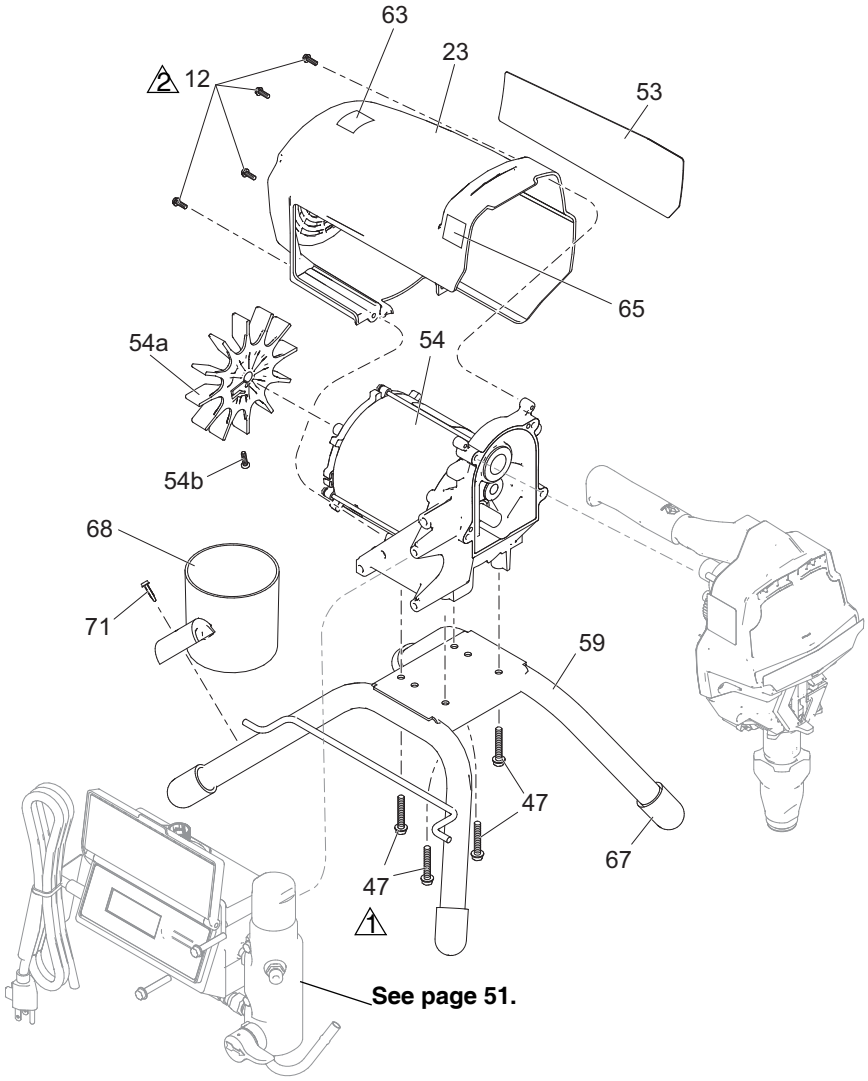
Troubleshooting Procedure

Troubleshooting Procedure

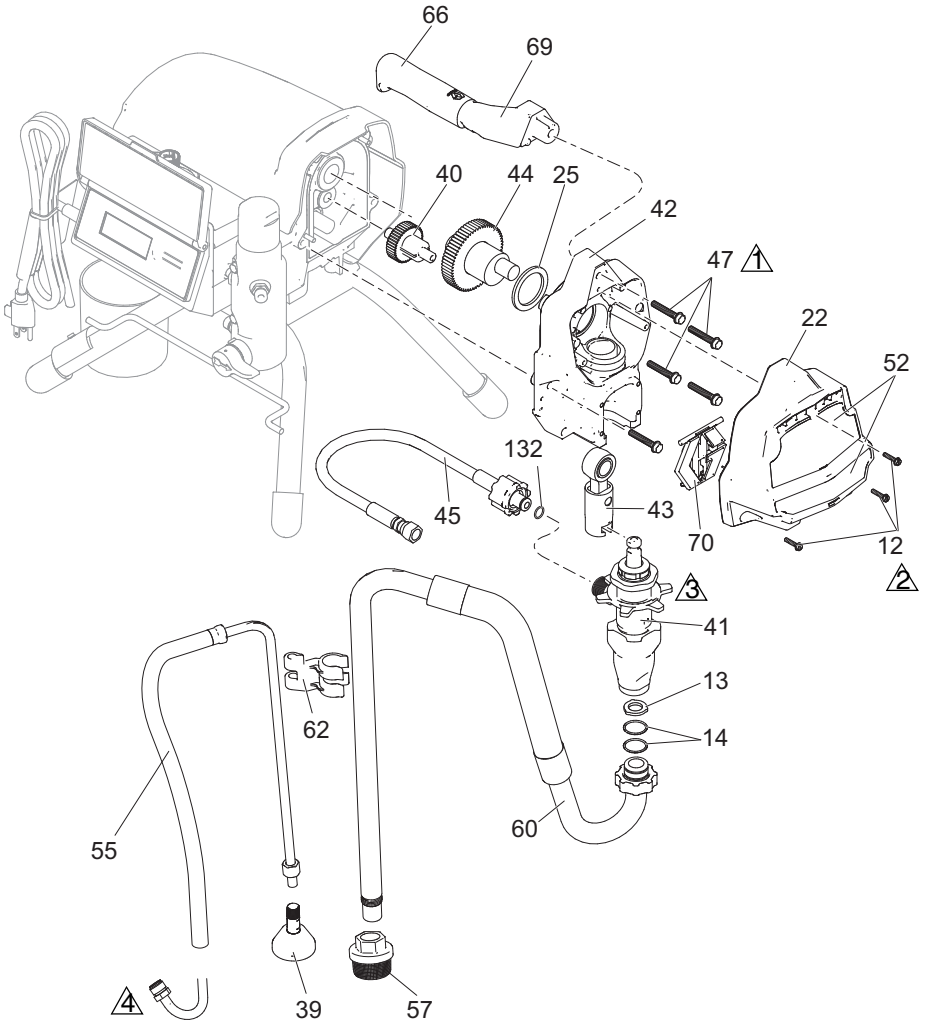

Plumb pressure gauge into paint hose, plug sprayer in, and turn power switch ON. Does sprayer reach or exceed its maximum pressure?
NO
Mechanical problem: See the proper fluid pump manual for the sprayer for further troubleshooting procedures.
YES
Is the control board status light on?
NO
Replace the control board.
YES
Unplug the transducer from control board. Does motor stop running?
NO
Replace the control board.
YES
Bad transducer. Replace and test with a new one.
ti24731a

395/490/495 Stand Sprayers

Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)



Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)
3	Hammer tight
4	25-30 ft-lb (33.9 - 40.7 N•m)



ti24993a

395/490/495 Stand Sprayers Parts List

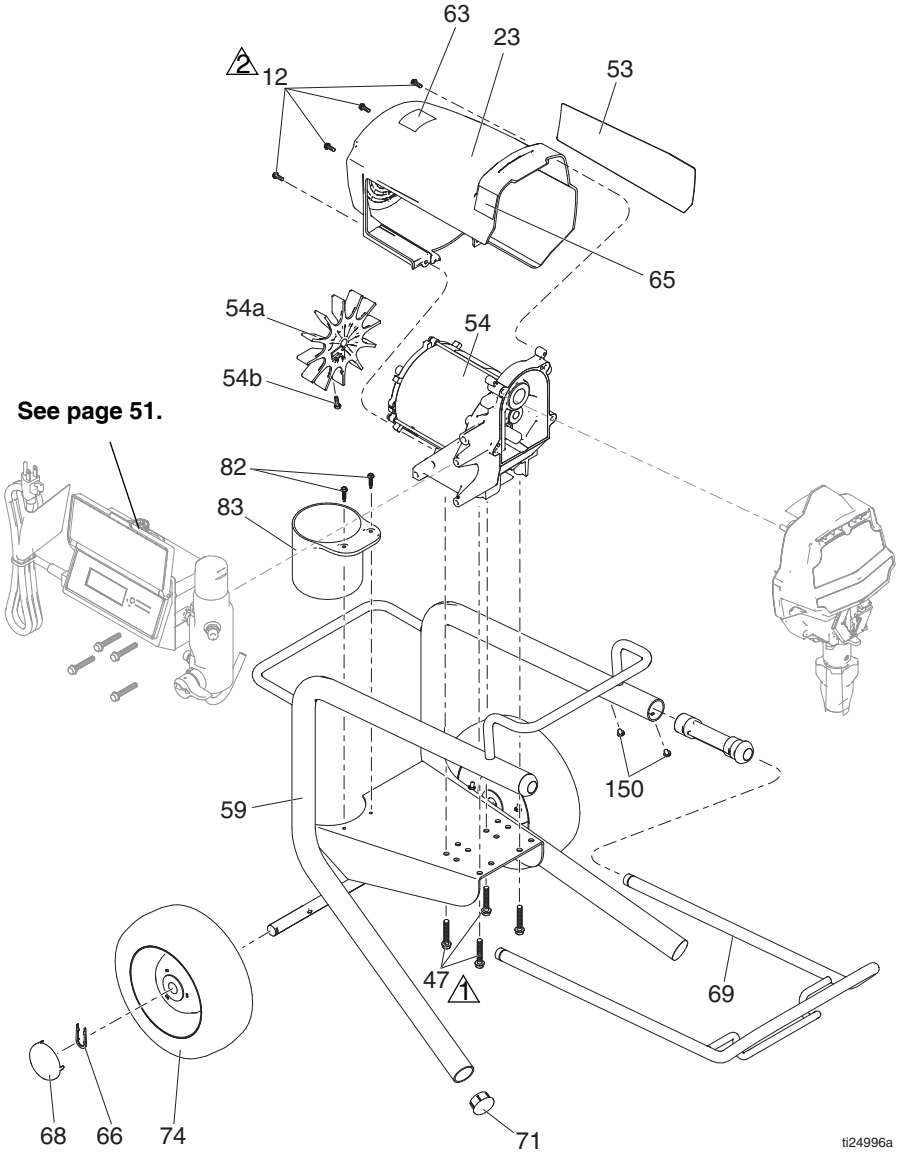
Ref.	Part	Description	Qty.
12	117501	SCREW, mach, hex washer hd	4
13	115099	WASHER, hose	1
14	117559	O-ring	2
22	17C541	COVER, front, painted	1
23	15G449	SHIELD, motor, painted	1
25	180131	BEARING, thrust	1
33	206994	FLUID, TSL (not shown)	1
34▲	See page 50	CARD, medical alert (not shown)	1
39	241920	DEFLECTOR, threaded	1
40	249194	GEAR, reducer	1
41		PUMP, displacement, PC	1
	17C487	North America	
	17C488	Europe	
	17C489	Asia/ANZ/Japan	
42	24W817	HOUSING, drive, PC, *includes 12, 47, 70*	1
43	24W640	ROD, connecting, PC	1
44	24X020	KIT, repair, crankshaft, *includes 25*	1
45	24W830	KIT, hose, cpld, PC, *includes 132*	1
46	See page 50	HOSE, cpld, 1/4 in. x 50 ft (not shown)	1
47	117493	SCREW, mach, hex washer hd	9
52	See page 50	LABEL, front, upper/lower	1
53	See page 50	LABEL, side	1
54*	24S022	MOTOR, kit *includes 54a, 54b*	1
54a	15D088	FAN, motor	1
54b	115477	SCREW, mach, torx, painted	1
55	246381	HOSE, drain, stand, *includes 39,62*	1
57	246385	STRAINER, 7/8-14 unf	1
59	15E823	FRAME, standmount	1
60	246386	KIT, hose suction, *includes 13, 14, 57, 62*	
61	See page 50	GUN, spray (not shown)	1
62	276888	CLIP, drain line	1
63▲	See page 50	LABEL, danger	1
65▲	See page 50	LABEL, warning	1
66	116139	GRIP, handle	1
67	15G857	CAP, leg	4
68	287903	CUP, suction/drain	1
69	287072	HANDLE, sprayer, *includes 47, 66*	1
70	17C483	COVER, pump rod	1
71	122667	SCREW, drill, hex washer head	1
108	115523	GAUGE, pressure, fluid, not shown (on select models)	1
132	16H137	PACKING, O-ring	1
139	127914	SCREW, mach, slot, hex	3

* *For motor brush kit order 287735*

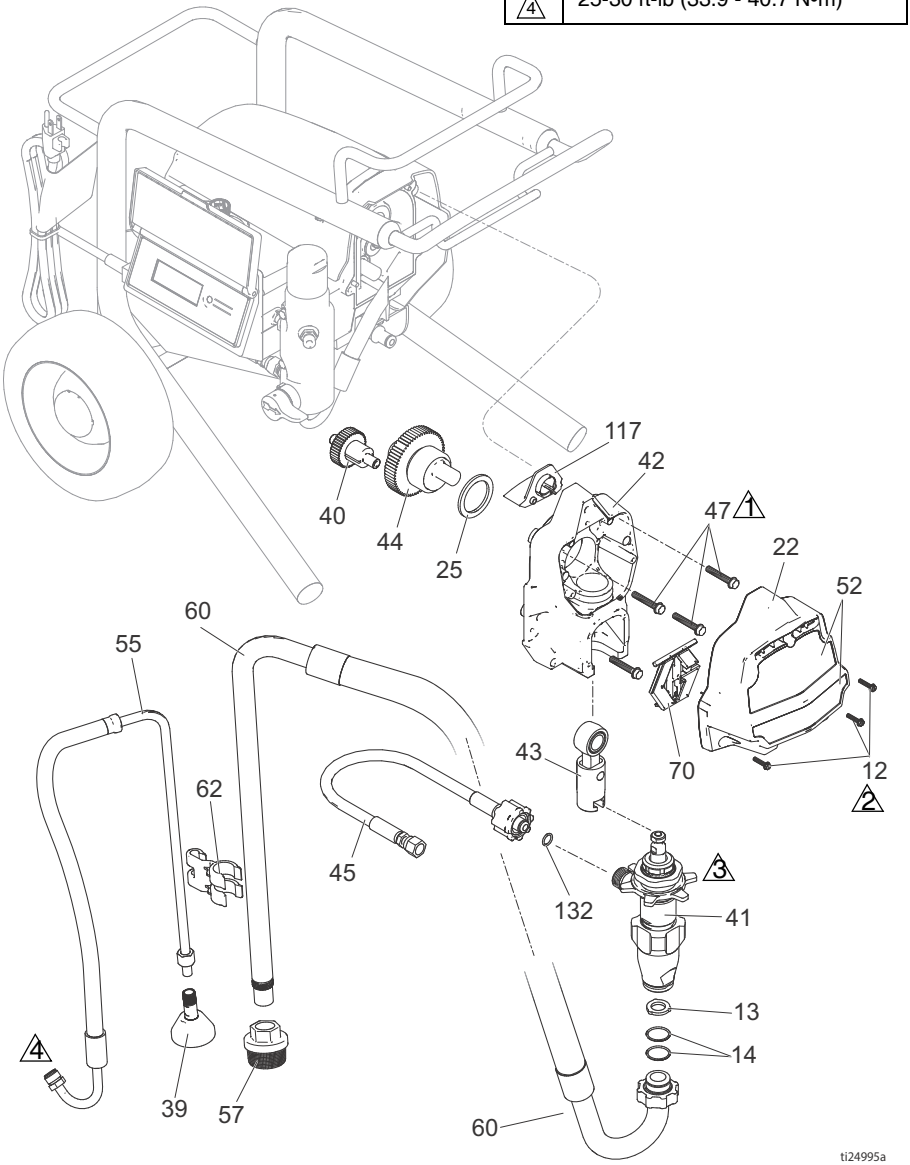
▲*Replacement Danger and Warning labels, tags, and cards are available at no cost.*

395/490/495/595 Lo-Boy Sprayers

Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)



Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)
3	Hammer tight
4	25-30 ft-lb (33.9 - 40.7 N•m)



395/490/495/595 Lo-Boy Sprayers Parts List

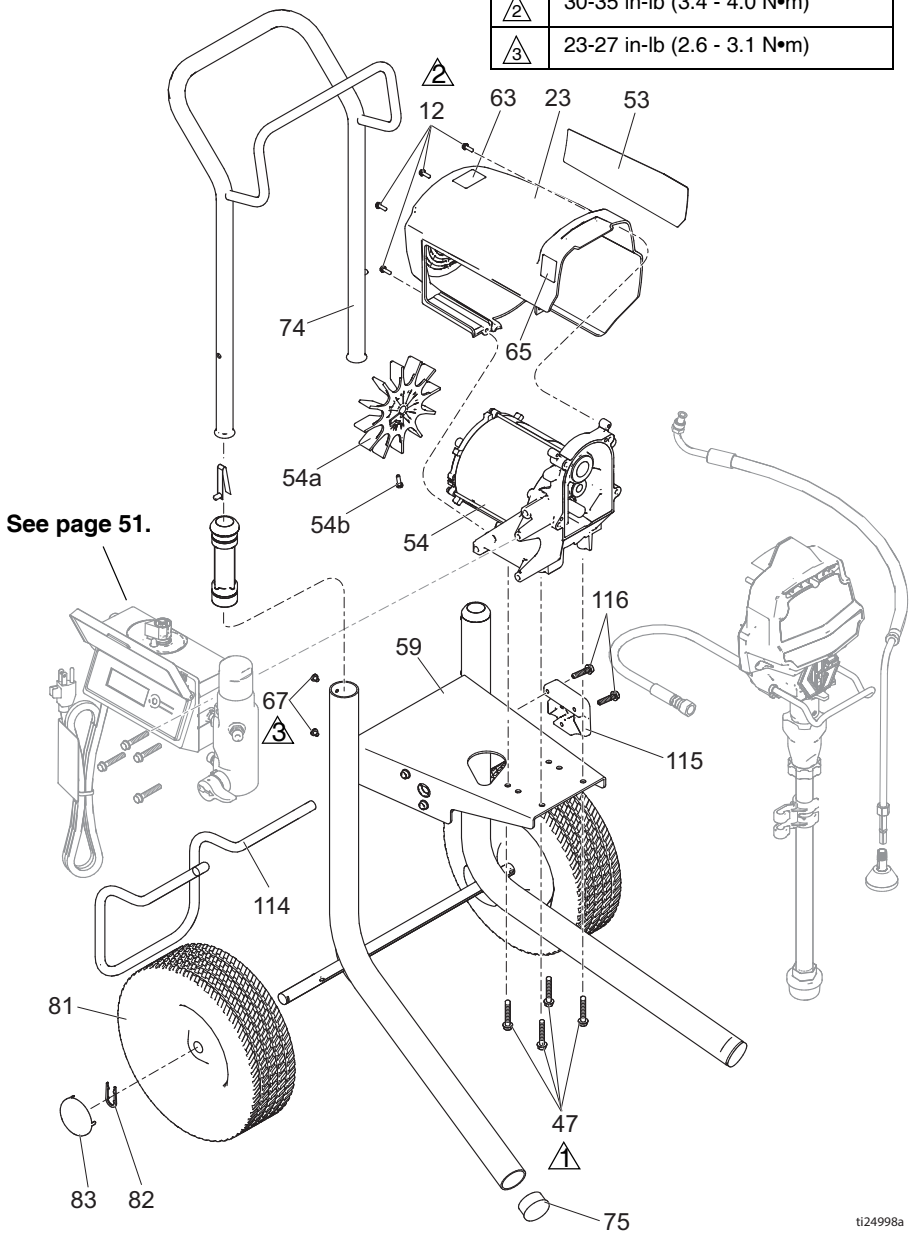
Ref.	Part	Description	Qty.
12	117501	SCREW, mach, hex washer hd	4
13	115099	WASHER, hose	1
14	117559	O-ring	2
22	17C541	COVER, front, painted	1
23	15G449	SHIELD, motor, painted	1
25	180131	BEARING, thrust	1
33	206994	FLUID, TSL (not shown)	1
34▲	See page 50	CARD, medical alert (not shown)	1
39	241920	DEFLECTOR, threaded	1
40	249194	GEAR, reducer	1
41		PUMP, displacement, PC	1
	17C487	North America	
	17C489	Asia, ANZ, Japan	
42	24W817	HOUSING, drive, PC, *includes 12, 47, 70*	1
43	24W640	ROD, connecting, PC	1
44		KIT, repair, crankshaft, *includes 25*	1
	24X020	Models 395/490/495	
	24X021	Model 595	
45	24W830	KIT, hose, cpld, PC, *includes 132*	1
46	See page 50	HOSE, cpld, 1/4 in. x 50 ft (not shown)	1
47	117493	SCREW, mach, hex washer hd	8
52	See page 50	LABEL, front, upper/lower	1
53	See page 50	LABEL, side	1
54*		MOTOR, *includes 54a, 54b*	1
	24S022	Models 395/490/495	
	287807	Model 595	
54a	15D088	FAN, motor	1
54b	115477	SCREW, mach, torx, painted	1
55	246381	HOSE, drain, stand, *includes 39,62*	1
57	246385	STRAINER, 7/8-14 unf	1
59	246250	FRAME, cart, lo	1
60	246386	KIT, hose suction, *includes 13, 14, 57, 62,*	
61	See page 50	GUN, spray (not shown)	1
62	276888	CLIP, drain line	1
63▲	See page 50	LABEL, danger	1
65▲	See page 50	LABEL, warning	1
66	15B999	CLIP, retaining	2
68	104811	CAP, hub	2
69	287488	HANDLE, assembly, lo cart	1
70	17C483	COVER, pump, rod	1
71	107310	PLUG, tubing	2
74	195766	WHEEL, semi pneumatic	2
82	122667	SCREW, drill, hex washer head	2
83	15B870	CUP, suction/drain	1
117	15G447	PLUG, shield painted	1
132	16H137	PACKING, O-ring	1
139	127914	SCREW, mach, slot, hex	3
150	109032	SCREW, pan hd	4

▲*Replacement Danger and Warning labels, tags, and cards are available at no cost.*

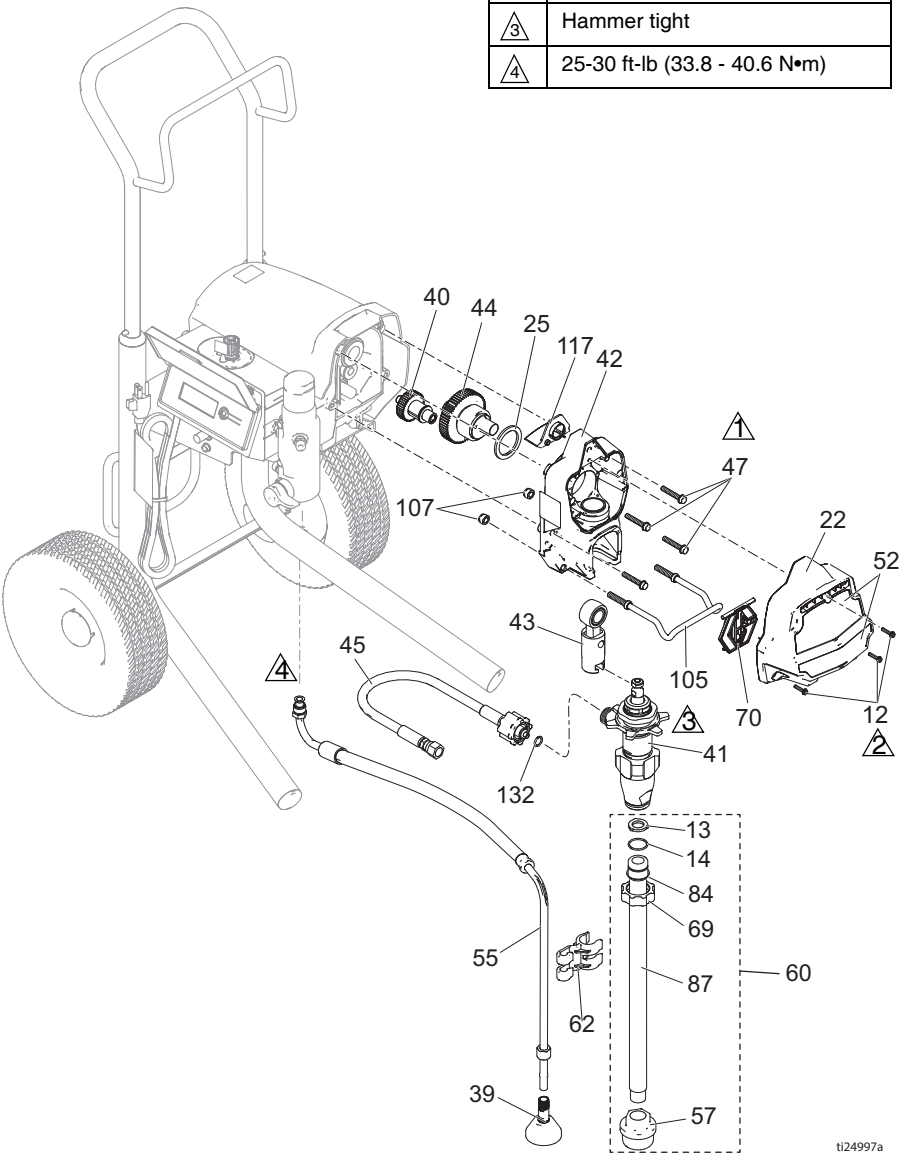
* *For motor brush kit order 287735*

395/490/495/595 Hi-Boy Sprayers

Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)
3	23-27 in-lb (2.6 - 3.1 N•m)



Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)
3	Hammer tight
4	25-30 ft-lb (33.8 - 40.6 N•m)



395/490/495/595 Hi-Boy Sprayers Parts List

Ref.	Part	Description	Qty.
12	117501	SCREW, mach, hex washer hd	4
13	115099	WASHER, hose	1
14	103413	O-ring	1
22	17C541	COVER, front, painted	1
23	15G449	SHIELD, motor, painted	1
25	180131	BEARING, thrust	1
33	206994	FLUID, TSL (not shown)	1
34▲	See page 50	CARD, medical alert (not shown)	1
39	241920	DEFLECTOR, threaded	1
40	249194	GEAR, reducer	1
41		PUMP, displacement, PC	1
	17C487	North America	
	17C488	Europe	
	17C489	Asia/ANZ/Japan	
42	24W817	HOUSING, drive, PC, *includes 12, 47, 70*	1
43	24W640	ROD, connecting, PC	1
44		KIT, repair, crankshaft, *includes 25*	1
	24X020	Models 395/490/495	
	24X021	Model 595	
45	24W830	KIT, hose, cpld, PC, *includes 132*	1
46	See page 50	HOSE, cpld, 1/4 in. x 50 ft (not shown)	1
47	117493	SCREW, mach, hex washer hd	8
52	See page 50	LABEL, front, upper/lower	1
53	See page 50	LABEL, side	1
54*		MOTOR, *includes 54a, 54b*	1
	24S022	395/490/495	
	287807	595	
54a	15D088	FAN, motor	1
54b	115477	SCREW, mach, torx, painted	1
55	244240	HOSE, drain, *includes 39*	1
57	246385	STRAINER, 7/8-14 unf	1
59	17C485	FRAME, cart, hi	1
60	17C992	KIT, stinger tube, *includes 13,14, 57, 69, 76, 84, 87*	
61	See page 50	GUN, spray (not shown)	1
62	276888	CLIP, drain line	1
63▲	See page 50	LABEL, danger	1
65▲	See page 50	LABEL, warning	1
67	109032	SCREW, pan hd	4
69	15E813	NUT, jam	1
70	17C483	COVER, pump rod	1
74	287489	HANDLE	1
75	108691	PLUG, tubing	2
81	106062	WHEEL	2
82	15B999	CLIP, retaining	2
83	104811	CAP, hub	2
84	15B652	WASHER, suction	1
87	17C281	TUBE, suction	1
105	17C990	HANGER, pail	1
107	111040	NUT, lock, insert, nylon	2
114	15D281	HANGER, stand (on select models)	1
115	15C982	CAM, cart (on select models)	2
116	114531	SCREW, mch, hex (on select models)	4
117	15G447	PLUG, tubing	1
122	118852	SCREW, thd forming (on select models, not shown)	3
123	287184	TOOL BOX (on select models, not shown)	1
132	16H137	PACKING, O-ring	1
139	127914	SCREW, mach, slot, hex	3

▲*Replacement Danger and Warning labels, tags, and cards are available at no cost.*

* *For motor brush kit order 287735*

Accessories and Labels

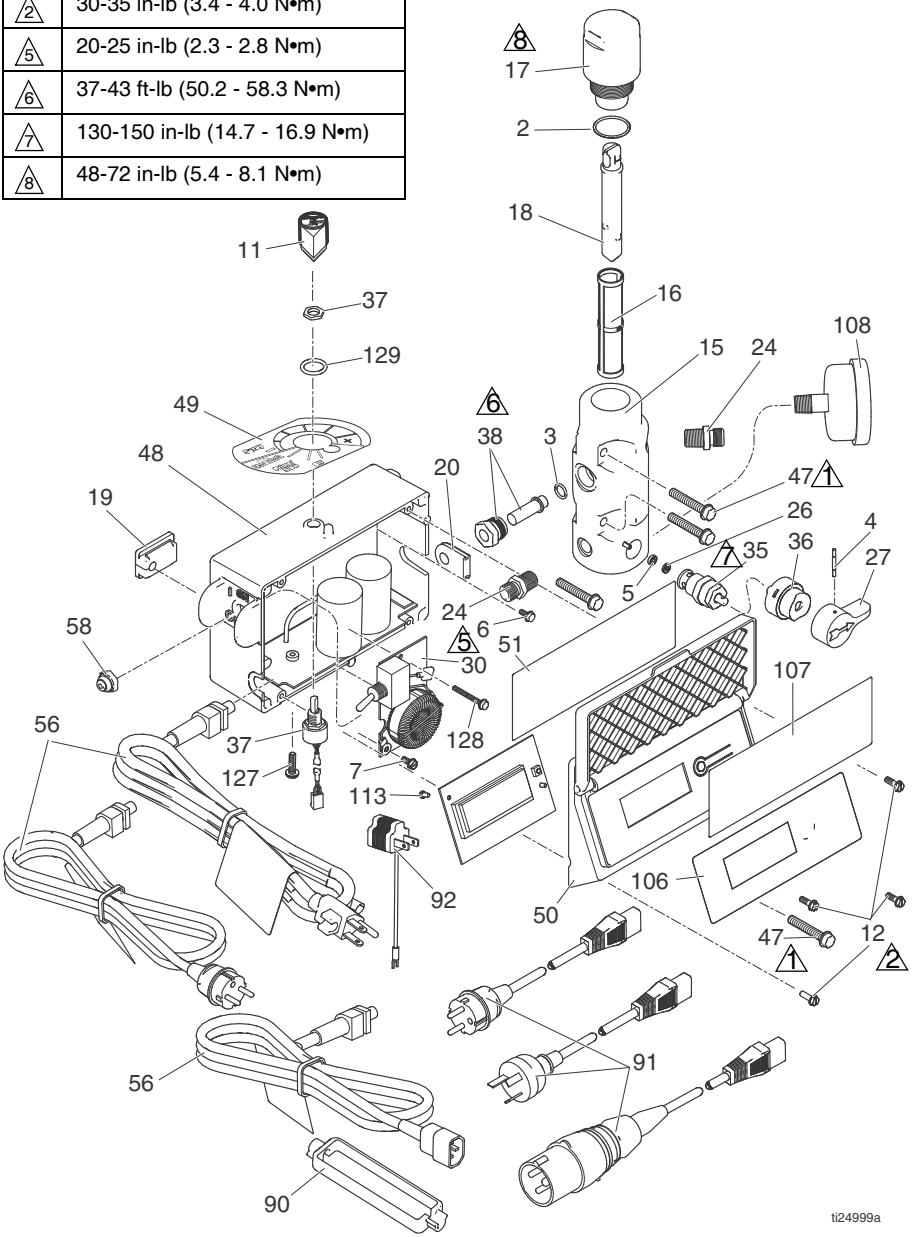
Sprayer Model	Ref. 34 Card, Medical Alert ▲	Ref. 46 Hose, 1/4 in. x 50 ft	Ref. 52 Label, Front, Upper/ Lower	Ref. 53 Label, Side	Ref. 61 Gun, Spray	Ref. 63 Label, Danger ▲	Ref. 65 Label, Warning ▲
826199 826200 826201	222385 #	826079	17C830/ 17C831	17C832	826085	15H085 #	195793 &
826202 826203 826204	222385 #	826079	17C830/ 17C835	17C836	826085	15H085 #	195793 &
826205 826206	222385 #	826079	17C830/ 17C839	17C840	826085	15H085 #	195793 &
17C327 17C328 17C332	222385 #	240794	17C827/ 17C828	17C829	288420	15H085 #	195793 &
17C333 17C334 17C335	222385 #	240794	17C827/ 17C833	17C834	288420	15H085 #	195793 &
17C336 17C337	222385 #	240794	17C827/ 17C837/	17C838	288420	15H085 #	195793 &
17C369 17C372	222385 #	240794	17C864/ 17C866	17C867	288438	- - -	16G596 ✔
17C373 17C374 17C375 17C376 17C377 17C378	222385 #	240794	17C864/ 17C868	17C869	288438	- - -	16G596 ✔
17C381 17C382 17C383	222385 #	240794	17C827/ 17C837	17C838	288438	- - -	16G596 ✔
17C393	222385 #	240794	17C827/ 17C828	17C829	17C926	15H086 *	195792 @
17C394	17A134 ❖	240794	17C827/ 17C857	17C858	288427/ 288436	15H087 @	195792 @
17C395	17A134 ❖	240794	17C827/ 17C828	17C829	17C926	15H087 @	195792 @
17C399	222385 #	240794	17C827/ 17C833	17C834	288427/ 288436	15H086 *	195792 @
17C398 17C401 17C402	17A134 ❖	240794	17C827/ 17C833	17C834	288427/ 288436	15H087 @	195792 @
17C403 17C404	17A134 ❖	240794	17C827/ 17C837	17C838	288427/ 288436	15H087 @	195792 @
288526 – Kit, accessory, hopper							

# – English, Spanish, French		@ – Asia/ANZ
❖ – English, Chinese, Korean		✔ – Europe
& – North America		* – Japan

▲*Replacement Danger and Warning labels, tags, and cards are available at no cost.*

Control Box

Ref.	Torque
1	140-160 in-lb (15.8 - 18.1 N•m)
2	30-35 in-lb (3.4 - 4.0 N•m)
5	20-25 in-lb (2.3 - 2.8 N•m)
6	37-43 ft-lb (50.2 - 58.3 N•m)
7	130-150 in-lb (14.7 - 16.9 N•m)
8	48-72 in-lb (5.4 - 8.1 N•m)



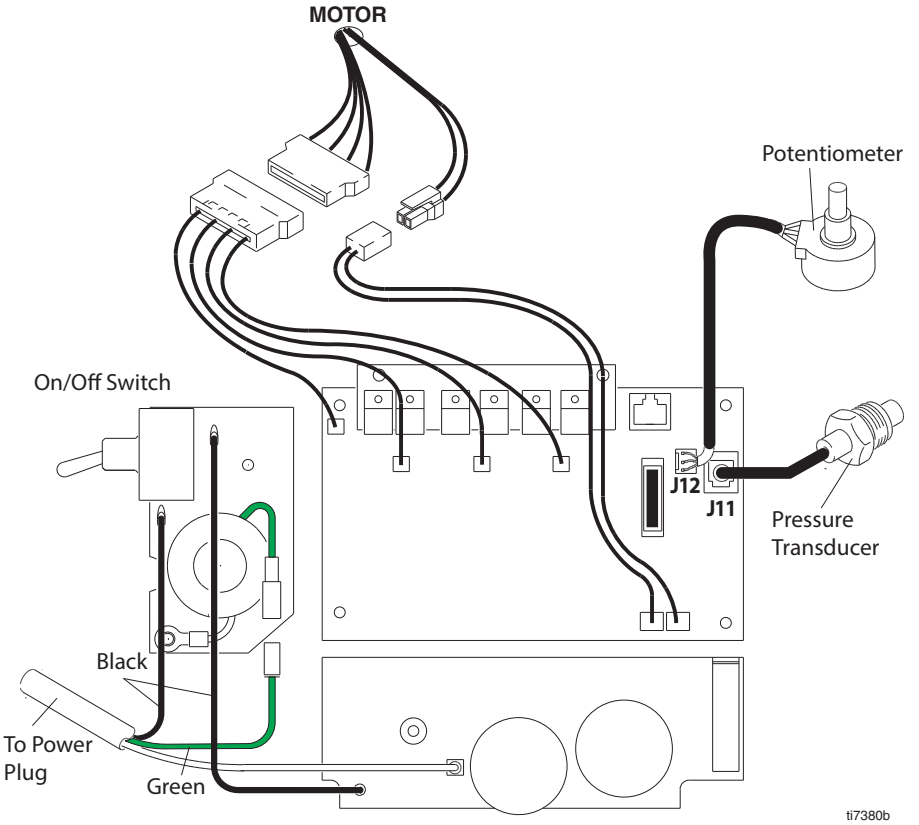
Control Box Parts List

Ref.	Part	Description	Qty.
2	117828	PACKING, o-ring	1
3	111457	PACKING, o-ring	1
4	111600	PIN, grooved	1
5	277364	GASKET, seat, valve	1
6	120405	SCREW, mach, Phillips, pan hd	5
7		SCREW, slot, hex, wash hd	1
	115498	230V and UK models	
	123850	120V US/Japan models	
11	116167	KNOB, potentiometer	1
12	117501	SCREW, mach, hex washer hd	6
15		MANIFOLD, fluid	1
	15G455	Models without pressure gauge	
	15T811	Models with pressure gauge	
16		FILTER, fluid	1
	246425	30 mesh	
	246384	60 mesh, original	
	246382	100 mesh	
	246383	200 mesh	
17	287902	KIT, repair, filter cap *includes 18*	1
18	15B071	INSERT, filter	1
19	15G562	BUSHING, control box	1
20	15B120	GROMMET, transducer	1
24	162453	NIPPLE, (1/4 npsm x 1/4 npt)	2
26	15E022	SEAT, valve	1
27	187625	HANDLE, valve, drain	1
30		BOARD, filter	1
	287911	120V, GFI, US/Japan	
	287912	110V, UK	
	287913	230V	
35	239914	VALVE, drain *includes 5, 26*	1
36	224807	BASE, valve	1
37	256219	POTENTIOMETER, adj, pressure with nut	1
38	243222	TRANSDUCER, pressure control, *includes 3*	1
47	117493	SCREW, mach, hex washer hd	4
48		BOX, control board *includes 6, 7, 11, 19, 30, 37, 49, 58, 127, 128, 129*	1
	24W893	120V, 490/495 models, US/Japan *includes 19*	
	24W894	120V, 595 models, US/Japan *includes 19*	
	24W895	230V	
	24W896	110V, UK	
49	17D154	LABEL, control, w/FastFlush	1
50		COVER, control	1
	277229	Models without display	
	24W892	DIGITAL, display *includes 51, 106, 107*	
51		LABEL, control	1
	17C964	Models without display	
	17C875	Models with display	
56		CORD, power	1
	253367	US, 490/495 models	
	253371	US, 595 models	
	253378	Japan	
	253373	Multicord, Asia/ANZ	
	242001	Europe	
	253369	CEE 7/7	
	253370	Multicord, Europe	
58	195428	BOOT, toggle	1
90	195551	RETAINER, plug, adapter	
		Multicord models	2
		CEE 7/7 models	1
91		CORD SET, adapter	1
	253368	UK	
	242005	Australia	

Ref.	Part	Description	Qty.
	287121	Italy, Denmark, Sweden	
92	244285	ADPTER, Japan	1
106	15G861	LABEL, smart control display	1
107	15G588	LABEL, digital tracking system	1
108	115523	GAUGE, pressure, fluid (on select models)	1
127	120165	SCREW, mach, Phillips, pan hd	1
128	120406	SCREW, mach, hex washer hd	1
129	158674	O-RING, packing	1
KIT, ProGuard+, 230V models only (not shown)			1
	24W090	CEE 7/7	
	24W755	Multicord, IEC-320	

Wiring Diagrams

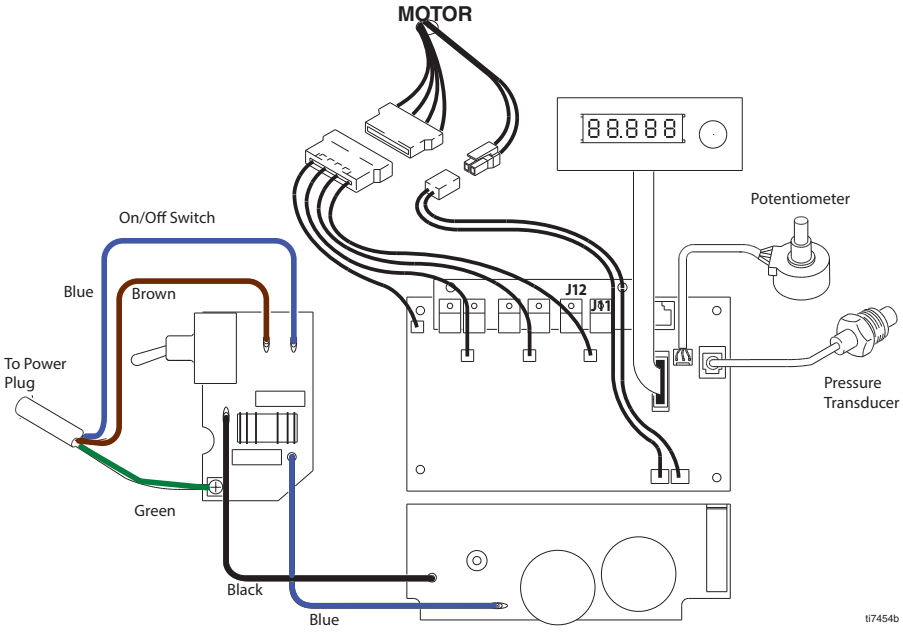
120V, US/Japan



110V, UK / 230V

NOTICE

Heat from inductor coil of filter board may destroy wire insulation that comes in contact with it. Exposed wires could cause shorts and component damage. Bundle and tie loose wires so none lay in contact with inductor coil on the filter board.



Technical Specifications

395/490/495/595		
	US	Metric
Sprayer		
Maximum fluid working pressure	3300 psi	228 bar, 22.8 MPa
Maximum Delivery		
395/490	0.54 gpm	2.0 lpm
495	0.60 gpm	2.3 lpm
595	0.68 gpm	2.6 lpm
Maximum Tip Size		
395/490	0.023	0.023
495	0.025	0.025
595	0.027	0.027
Fluid Outlet npsm	1/4 in.	6.3 mm
Cycles		
395/490/495	620 per gallon	164 per liter
595	540 per gallon	143 per liter
Generator Minimum		
395/490	3500 W	
495	3750 W	
595	4000 W	
Power Requirements		
395/490 1Ø, 50/60 Hz	110–120V, 12 A / 220–240V, 7 A	
495 1Ø, 50/60 Hz	110–120V, 15 A / 220–240V, 9 A	
595 1Ø, 50/60 Hz	110–120V, 15 A / 220–240V, 9 A	
Dimensions		
Height		
Stand	18.5 in.	47.0 cm
Lo-Boy	22.5 in.	57.1 cm
Hi-Boy	29 in. (Handle down) 38 in. (Handle up)	73.4 cm (Handle down) 96.5 cm (Handle up)
Length		
Stand	16.25 in.	41.3 cm
Lo-Boy	26.5 in.	67.3 cm
Hi-Boy	23.25 in.	59.1 cm
Width		
Stand	13.5 in.	34.3 cm
Lo-Boy	20 in.	50.8 cm
Hi-Boy	20.75 in.	52.7 cm

395/490/495/595		
	US	Metric
Weight		
Stand		
395	45.1 lb.	20.5 kg
490 / 495	34 lb.	15 kg
Lo-Boy		
395	63 lb.	29 kg
490 / 495	59.1 lb.	26.8 kg
595	70 lb.	31.8 kg
Hi-Boy		
395	66 lb.	30 kg
490 / 495	66.1 lb.	30 kg
595	73 lb.	33 kg
Noise** (dBa) @ 70 psi (0.48 MPa, 4.8 bar)		
Sound pressure	90 dBa	
Sound power	100 dBa	
Materials of Construction		
Wetted materials on all models	zinc- and nickel-plated carbon steel, nylon, stainless steel, PTFE, Acetal, leather, UHMWPE, aluminum, tungsten carbide, polyethylene, fluoroelastomer, urethane	
Notes		
** Startup pressures and displacement per cycle may vary based on suction condition, discharge head, air pressure, and fluid type.*		
*** Sound pressure measured 3 feet (1 meter) from equipment.*		
Sound power measured per ISO-3744.		

Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

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